Explosives and Chemical Weapons Identification

James B. Crippin

Forensic Science Techniques Series

CRC Taylor & Francis
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Explosives and Chemical Weapons Identification

Forensic Science Techniques Series

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Explosives and Chemical Weapons Identification,
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Foreword and Dedication

I have thought long and hard about this book. This book was not created to make money. It was created to save lives — the lives of first responders and the people they have dedicated their lives to protect, the general public.

What is a first responder? It is a phrase often mentioned in the press but rarely defined.

First responders are just that, the first on the site of an incident. They can be anyone, and more often than not, they are handicapped with too little knowledge and inadequate equipment. This book is based on software that another first responder and I developed to help alleviate these problems. It offers first responders a resource to pull out and consult very quickly that may completely change how a response proceeds.

Chemicals are a part of everyday life and can be found all around us. Many common chemicals, when mixed improperly (intentionally or not), can have serious implications for those who come into contact with them or are in their vicinity. This book is designed to give the user the ablility to quickly identify what type of explosive or chemical weapon could possibly be the focus of an investigation and what types of chemicals might be involved. It cannot be used to help manufacture these items. It is merely a tool for law enforcement to use in the war on terrorism and other types of criminal activities.

I dedicate this book to those who "step in it" first: The First Responder: Our First Line of Defense. They are always the first in and generally the last out. I know; I have been there myself.

James B. Crippin

The Author

James B. Crippin is the director of the Western Forensic Law Enforcement Training Center. He set up this training center in February 2002. It is a federally-funded facility devoted to updating and training law enforcement and private corporations in the area of explosive investigation and analysis, first responder safety, WMD response, general crime scene investigation and response, and other areas of forensic science. Additionally, this facility provides forensic casework in the area of trace analysis for the state of Colorado, as well as other areas of the U.S. The training center and forensic lab are located on the campus of Colorado State University–Pueblo.

Crippin first started his career in forensics in 1977 and still is extremely active in the field of forensic science. From August 1978 to August 1984, he served as forensic chemist with the Missouri State Highway Patrol system. In August 1984 he was promoted to laboratory supervisor of the St. Joseph, Missouri, Troop H laboratory. During his tenure with the Missouri State Highway Patrol, he was responsible for working all of the explosive incidents in the state.

Crippin resigned from the Missouri State Highway Patrol in August 1988 and became a commissioned agent with the Colorado Bureau of Investigation. He was assigned to the Pueblo office laboratory. While an agent with the Colorado Bureau of Investigation, Crippin was involved in many of the agency's most notable cases. In 1988–1989, he worked one of the first recorded terrorist cases in Colorado—the Al Fuqra bombings. In 1998 he spent 16 days in body armor pursuing three survivalists who had machine-gunned a city police officer to death. During this 16-day response, he assisted in the recovery of numerous explosive devices and helped process many of 20 separate crime scenes. In 1999, Crippin was one of the crime scene team leaders who entered and processed Columbine High School. During that time his team was responsible for processing all areas where explosive devices had been used and, several days into the processing, was one of the individuals who discovered a large duffel bag explosive device that had not functioned. In 2001, during the Arkansas River Canyon shootings, his crime scene team helped process over 16 crime scenes in 3 days.

In February 2002, Crippin resigned from the Colorado Bureau of Investigation to form the Western Forensic Law Enforcement Training Center

(WFLETC). From February 2002 to the present time, he has helped develop explosive analysis programs and train personnel for the Georgia Bureau of Investigation, Tucson Police Department, and the Texas Department of Public Safety. He also has provided forensic analysis in various areas for both private companies and corporations, and law enforcement agencies.

Also during this time, Crippin became one of the primary instructors at the Weapons of Mass Destruction School located at the Emergency Response Training Center in Pueblo, Colorado. This school has trained over 125 students from both private industry and law enforcement agencies throughout the U.S. and abroad.

Additionally, Crippin is actively involved with Colorado State University– Pueblo's efforts to start a forensic degree program. He helps teach classes in forensics and has been appointed as the director of the new forensic analysis laboratory being set up on campus. This is the culmination of a 4-year effort by Crippin and the current dean of science and mathematics, Dr. Kristina Proctor. Crippin's duties at the campus laboratory included both the complete setup of the facility and actual analysis of evidence. The WFLETC has been in operation since August 2003 and is seeing an ever-increasing caseload of evidence and training requests.

Crippin has been very active in forensics his entire career and continues to be. He is a member of the following professional associations: Southwestern Association of Forensic Scientist (SWAFS), Midwestern Association of Forensic Scientists (MAFS), Southern Association of Forensic Scientists (SAFS), American Academy of Forensic Science (AAFS), Technical Working Group For Fire and Explosions (TWGFEX), International Association for Microanalysis (IAMA), International Association of Bomb Technicians and Investigators (IABTI), Colorado Springs Multi-Agency Terrorism Task Force (MATT), and Southeastern Colorado Law Enforcement Association (SECLEA). He has also been on the board of directors of both MAFS and SWAFS, and was president and chairman of the board for SWAFS. Currently, he is serving a second term on the executive committee of TWGFEX. Recently, he was elected chairman of TWGFEX and also sits on the board of directors of IAMA. He also is on the training and education committee for MAFS.

During his forensic career, Crippin has taught more than 60 classes in various areas of forensic science, including drug analysis, explosive analysis, and arson analysis. He also has given numerous classes for law enforcement personnel in the areas of crime scene response, weapons of mass destruction, and explosives recognition and booby-trap recognition and avoidance. He has published 8 papers in professional journals and has presented 25 papers at professional meetings.

Crippin graduated from Missouri Western State College in St. Joseph, Missouri, in 1977 with a bachelor of science degree in biology.

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Chemical Compounds, Part 1

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Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
AC	Ammonium chlorate	Yes	No	Secondary high explosive
AC	Ammonium chlorate	Yes	No	Secondary high explosive
AC	Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure	No	Yes	Blood agent, Extreme poison
AC	Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure	No	Yes	Blood agent, Extreme poison
ADBN	4,Azido-4,4-dinitro-1-butyl nitrate	Yes	No	Secondary high explosive
ADNB	4,Azido-4,4-dinitro-1-butyl acetate	Yes	No	Secondary high explosive
ADNBF	7-Amino-4,6-dinitrobenzofuroxan	Yes	No	Secondary high explosive
Aluminum		No	No	Fuel
Amatol		Yes	No	Secondary high explosive, Mixture of TNT and Ammonium nitrate, Military explosive
Ammonium azide		Yes	No	Primary high explosive
Ammonium nitrate		Yes	No	Secondary high explosive
Ammonium nitrate		Yes	No	Secondary high explosive
Ammonium nitrate		Yes	No	Secondary high explosive
Ammonium nitrate		Yes	No	Low explosive, Primary ingredient in many types of commercial blasting materials (i.e., ANFO, dynamite, etc.)
Ammonium nitrate		Yes	No	Oxidizer
Ammonium perchlorate		No	No	Oxidizer
Ammonium picramate	Ammonium 2-amino-4,6-dinitrophenolate, Ammonium 2-amino-4,6-dinitropicrate	Yes	No	Primary high explosive
Ammonium picrate		Yes	No	Primary high explosive
Ammonium picrate	Explosive D	Yes	No	Secondary high explosive, Main charge castable explosive

Ammonium tri-iodide	Fly mines, Nitrogen tri-iodide	Yes	No	Primary high explosive, Impact-sensitive material
Ammonpulver		Yes	No	Early form of black powder
AND	Ammonium dinitramide	Yes	No	Secondary high explosive
AND	Ammonium dinitramide	Yes	No	Secondary high explosive
AND	Ammonium dinitramide	Yes	No	Secondary high explosive
ANFO	Binary explosive	Yes	No	Secondary high explosive
A-NPNT	4-Amino-*N*,2,3,5,6-pentanitrotoluene	Yes	No	Secondary high explosive
ANS	ANS	Yes	No	"Underground" literature explosive
Anthracene		No	No	Smoke ingredient
Antimony		No	No	Fuel
Antimony trisulfide		No	No	Fuel
APC	Ammonium perchlorate	Yes	No	Secondary high explosive
APC	Ammonium perchlorate	Yes	No	Secondary high explosive
Arsine	Arsenic hydride, Hydrogen arsenide	No	Yes	Blood agent
AS-20	Distilled arsine, Phenylarsine, Diphenylarsine	No	Yes	Blister agent
Astrolite		Yes	No	Secondary high explosive, Binary high explosive, Mixture of hydrazine, aluminum, and ammonium nitrate
Azidoethyl	Tris(2-azidoethyl)amine	Yes	No	Secondary high explosive
Barium carbonate		No	No	Coloring agent
Barium chlorate		No	No	Oxidizer coloring agent
Barium nitrate		No	No	Oxidizer coloring agent
Barium oxalate		No	No	Coloring agent
Barium styphnate		Yes	No	Primary high explosive
BBC	Bromobenzylcyanide, Camite, a-Bromobenzeneacetonitrile, a-Bromo-a-tolunitrile	No	Yes	Lachrymatory agent, Severe irritant
BC	Cyanogen bromide, Bromide cyanide	No	Yes	Violent irritant

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
BC	Cyanogen bromide, Bromide cyanide	No	Yes	Violent irritant
BC	1-Bromo-2-propanone	No	Yes	Lachrymatory agent
BDC	Biguanide diperchlorate	Yes	No	Secondary high explosive
BDPF	Bis(1,3-diazido-2-propyl)formal	Yes	No	Secondary high explosive
BE	Binary explosive	Yes	No	Secondary high explosive
BE	Binary explosive	Yes	No	Secondary high explosive
Black Powder	Gunpowder	Yes	No	Low explosive, IED filler, Black powder weapon propellant
Black Powder	Gunpowder	Yes	No	Low explosive, IED filler
Black smoke		No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Black smoke		No	No	Black smoke produced, Screening/signaling smoke
Black smoke		No	No	Black smoke produced, Screening/signaling smoke
Boric acid		No	No	Stabilizers
Bromopicrin	Nitrobromoform, Bromoacquinite, Tribromonitromethane, Picfume bromide	No	Yes	Lachrymatory agent
CA	Chloroacetone, 1-Chloro-2-propanone	No	Yes	Lachrymatory agent
CA	Cyanogen, Ethanedinitrile, Dicyan, Oxalic acid dinitrile, Dicyanide	No	Yes	Blood agent, Extreme poison
CA	Chloroacetone, 1-Chloro-2-propanone	No	Yes	Lachrymatory agent
Calcium carbonate		No	No	Stabilizers
Calcium oxalate		No	No	Coloring agent
Carbon black	Lampblack	No	No	Fuel
CDNTA	3,5-Dinitro-1,2,4-triazole copper salt	Yes	No	Primary high explosive
CE	Cast explosive	Yes	No	Secondary high explosive

CE	Cast explosive	Yes	No	Secondary high explosive
CE	Cast explosive	Yes	No	Secondary high explosive
CE	Cast explosive	Yes	No	Secondary high explosive
Charcoal		No	No	Fuel
Chemical agent 4-686-293-01	Agent 1-10,1,10-bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]decane dimethobromide 1/2 hydrate	No	Yes	Experimental chemical agent
Chemical agent 4-686-293-02	Agent 1-8, 1,8-bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]octane dimethobromide monohydrate	No	Yes	Experimental chemical agent
Chemical agent 4-692-530-01	Bis{a-[(3-dimethylcarbamoxy-a-picolinyl)pyrrolidinio]}-4,4′-biacetophenone dibromide monohydrate	No	Yes	Experimental chemical agent
Chemical agent 4-692-530-02	Bis{a-[(3-dimethylcarbamoxyphenyl)-methylamino]}-4,4′-biacetophenone dibromide monohydrate	No	Yes	Experimental chemical agent
Chlorine gas		No	Yes	Poison gas used in WW I
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	No	Yes	Lachrymatory agent
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	No	No	Lachrymatory agent
Chlorosarin	ClCB, Isopropylmethylphosphonochloridat, Isopropoxymethylphosphoryl chloride	No	Yes	Nerve agent
CK	Cyanogen chloride, Chloride cyanide	No	Yes	Blood agent, Extreme poison
CK	Cyanogen chloride, Chloride cyanide	No	Yes	Blood agent, Extreme poison
Clay		No	No	Insulator
CN	Chloroacetophenone, Mace, 2-Chloro-1-phenylethanone, 2-Chloroacetophenone	No	Yes	Severe irritant
CNTA	5-Nitroterazole copper salt	Yes	No	Primary high explosive

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
Comp C-1		Yes	No	Secondary high explosive, Plastic explosive
Copper		No	No	Coloring agent
Copper acetanarsenate		No	No	Coloring agent
Copper azide		Yes	No	Primary high explosive
Copper carbonate		No	No	Coloring agent
Copper chloride		No	No	Coloring agent
Copper fulminate		Yes	No	Primary high explosive
Copper oxide		No	No	Coloring agent
Cryolite		No	No	Coloring agent
CS	*o*-Chlorobenzalmalononitrile, *B*,*B*-Dicyano-*o*-chlorostyrene, *o*-Chlorobenzylidenemalononitrile	No	Yes	Severe irritant
CX	Phosgene oxime, Dichlorofirmoxime, Hornet gas, Nettle gas	No	Yes	Blister agent
Cyclonite	RDX, C4	Yes	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Cyclonite	RDX, C4	Yes	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
DA	Diphenylchloroarsine	No	Yes	Lachrymatory agent
DANP	1,3-Diazido-2-nitrazapropane	Yes	No	Secondary high explosive
DATB	1,3-Diamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
DATBA	5-Carboxy-1,3-diamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
DCA	1,1-Dichloro-2-propanone, 1,1-Dichloroacetone	No	Yes	Severe irritant
DDD	5,7-Dintiro-5,7-diaza-1,3-dioxabicyclooctane-2-one	Yes	No	Secondary high explosive

DDNP	Diazodinitrophenol	Yes	No	Primary high explosive
DDNP	Diazodinitrophenol	Yes	No	Primary high explosive
Dextrin		No	No	Binder
DIANP	1,5-Diazido-3-nitrazapentane	Yes	No	Secondary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	Yes	No	Primary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	Yes	No	Primary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	Yes	No	Primary high explosive
DIM	Diimine, *N*,*N*′-bis-Isopropylethylenediimine	No	Yes	Severe irritant
DINA	Dintroxydiethylnitramine	Yes	No	Secondary high explosive
DINA	Dintroxydiethylnitramine	Yes	No	Secondary high explosive
DINA	Dintroxydiethylnitramine	Yes	No	Secondary high explosive
DITN	Diisopropylamine trinatrate	Yes	No	Secondary high explosive
DM	Adamsite, Phenarsazine chloride, Diphenylaminechloroarsine,10-chloro-5,10-dihydrophenarsazine	No	Yes	Vomiting agent
DMMD	2,4-Dinitro-2,4-diazapentane	Yes	No	Secondary high explosive
DNAN	Dintroxydiethylamine nitrate	Yes	No	Secondary high explosive
DNAT	1,1′-Dintro-3,3-azo-1,2,4-triazole	Yes	No	Secondary high explosive
DNB	4,4-Dinitro-1-butanol	Yes	No	Secondary high explosive
DNFA-P	1,4-Dinitrofurazano piperazine	Yes	No	Secondary high explosive
DNP	2,4-Dinitrophenol	Yes	No	Secondary high explosive
DNP	Lead picrate	Yes	No	Primary high explosive
DNPU	2,4-Dinitrophenylurea	Yes	No	Secondary high explosive
DNR	4,6-Dinitroresorcinol	Yes	No	Secondary high explosive
DPT	Methylenedinitrotetraazacyclooctane	Yes	No	Secondary high explosive
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
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Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		Yes	No	Secondary high explosive, Used in commercial blasting operations
ED	Ethyldichloroarsine	No	Yes	Blister agent
ED	Ethyldichloroarsine	No	Yes	Blister agent

EDDN	Ethylenediamine dinitrate	Yes	No	Secondary high explosive
EDT	*N*,*N*′-di-2-Ethanolethylenediamine tetranitrate	Yes	No	Secondary high explosive
EGDN	Nitroglycol, Ethylene glycol dinitrate	No	No	Replaced nitroglycerin as "main" component in dynamites
Emulsion explosive		Yes	No	Secondary high explosive, Used in commercial blasting operations, "Gelled" explosive
ETN	Erythritol tetranitrate	Yes	No	Secondary high explosive
FI	Flash incendiary	Yes	No	"Underground" literature explosive
Fire bricks		No	No	"Underground" literature incendiary
Fire gel	Homemade napalm	No	No	"Underground" literature incendiary
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash comp		Yes	No	Low explosive, "Underground" literature explosive
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
FTH	Fluorotabun hydrochloride, Dimethylamidoethoxyphosphoryl fluoride-hydrochloride, *N*-Dimethylphosphoramidofluoridate-hydrochloride	No	Yes	Nerve agent
F-TNB	1,3,5-Trifluoro-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	No	Yes	Nerve agent

(continued)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	No	Yes	Nerve agent
GAA	Tabun-II, Diethylamidoethoxyphosphoryl cyanide, *N*-Diethylphosphoramidocyanidate	No	Yes	Nerve agent
GAA	Thiotabun, Dimethylamidoethoxythiophosphorus cyanide, *N*-Diethylthiophosphoroamidocyanidate	No	Yes	Nerve agent
Gallic acid		No	No	Binder
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	No	Yes	Nerve agent
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	No	Yes	Nerve agent
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphoryl fluoride	No	Yes	Nerve agent
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphoryl fluoride	No	Yes	Nerve agent
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	No	Yes	Nerve agent
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	No	Yes	Nerve agent

GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Tri-methylpropyl ester	No	Yes	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Tri-methylpropyl ester	No	Yes	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Tri-methylpropyl ester	No	Yes	Nerve agent
GDCl	Chlorosoman, Chlorotrilon, Pinacolyl methylchlorophosphorusfluoridate, Methylchlorophosphorusfluoridic acid, 1,3-Tri-methylpropyl ester	No	Yes	Nerve agent
GDS	Thiosoman, Thiotrilon, Pinacolyl methylthiophosphorusfluoridate, Methylthiophosphorusfluoridic acid, 1,3-Tri-methylpropyl ester	No	Yes	Nerve agent
Gelatin explosive		Yes	No	Secondary high explosive, "Underground" literature explosive
GF	Cyclosarin, *o*-Cyclohexylmethylfluorophosphonate, CMPF	No	Yes	Nerve agent
GF	Cyclosarin, *o*-Cyclohexylmethylfluorophosphonate, CMPF	No	Yes	Nerve agent

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
Green smoke		No	No	Green smoke produced, Screening/signaling smoke
GS	Thiosarin, Sulfur sarin, Isopropylethylthiophosphorusfluoridate, Isopropylethylthiophosphorus fluoride, *o*-Isopropyl methylphosphonofluoridothioate	No	Yes	Nerve agent
Gum arabic		No	No	Binder
HBN	Hexanitrobibenzyl	Yes	No	Secondary high explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive
HE mix		Yes	No	High explosive, "Underground" literature explosive

Hexachlorobenzene		No	No	Color enhancer
Hexachloromethane		No	No	Smoke ingredient
Hexaditon	2,2′,4,4′,6,6′-Hexanitrodiphenylmethane	Yes	No	Secondary high explosive
Hexamethylenetetramine dinitrate		Yes	No	High explosive, "Underground" literature explosive
Hexamine	Methenamine	No	No	Used to make C4-like compounds
Hexanitrate	Sorbitol hexanitrate	Yes	No	Secondary high explosive
Hexol	Hexanitrobibenzyl	Yes	No	Secondary high explosive
HGNTA	Mercury nitrotetrazole	Yes	No	Primary high explosive
HMTD	Hexamethylenetriperoxide diamine	Yes	No	Secondary high explosive, Originally developed as a military propellant, Used by terrorists as main charge
HMX	Octagen, Tetranitro-tetraazacyclooctane	Yes	No	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HMX	Octagen, Tetranitro-tetraazacyclooctane	Yes	No	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine, *N*,*N*-bis(2-chloroethyl)ethanamine, 2,2′,-dichlorodiethylamine	No	Yes	Blister agent
HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine, *N*,*N*-bis(2-chloroethyl)ethanamine, 2,2′,-dichlorodiethylamine	No	Yes	Blister agent
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis(2-chloroethyl)methamine, 2,2′-dichlorodiethylmethylamine	No	Yes	Blister agent

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis(2-chloroethyl)methamine, 2,2′-dichlorodiethylmethylamine	No	Yes	Blister agent
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis(2-chloroethyl)-ethaneamine, 2,2′,2″-Trichlorotriethylamine	No	Yes	Blister agent
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis(2-chloroethyl)ethaneamine, 2,2′,2″-Trichlorotriethylamine	No	Yes	Blister agent
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine, 2,2′,2″-Trichlorotributylamine	No	Yes	Blister agent
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine, 2,2′,2″-Trichlorotributylamine	No	Yes	Blister agent
HNBP	Hexanitrobiphenyl	Yes	No	Secondary high explosive
HNF	Hydrazine nitroform, Hydrazinium nitroformate	Yes	No	Secondary high explosive
HNF	Hydrazine nitroform, Hydrazinium nitroformate	Yes	No	Secondary high explosive
HNH-3	1,1,1,6,6,6-Hexanitrohexyne-3	Yes	No	Secondary high explosive
HNIW	Hexanitro-hexaazaisowurtzane	Yes	No	Secondary high explosive
HNS	Hexanitrostilbene	Yes	No	Secondary high explosive
HNS	Hexanitrostilbene	Yes	No	Secondary high explosive
HNTCAB	Hexanitrotetrachloroazobenzene	Yes	No	Secondary high explosive
HTH	Calcium hypochlorite	No	No	Produces high-temperature thermal effects
Hydrogen gas		Yes	No	Fuel/air explosive component
Hydrogen gas		Yes	No	Fuel/air explosive component

IEM	Improvised ANFO	Yes	No	Secondary high explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Poor man's C4	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM		Yes	No	Low explosive, "Underground" literature explosive
IEM		Yes	No	Low explosive, "Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM		Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
IEM		No	No	Secondary high explosive, "Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised ANFO	Yes	No	Secondary high explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IIVX	Sub-VX,*S*-(2-dimethylaminomethyl)-*o*-ethyl methylphosphonothiolate, *o*-ethyl *S*-[2-(dimethylamino)methyl]-methylphosphonothioate	No	Yes	Nerve agent
Inositol nitrate	Inositol hexanitrate	Yes	No	Secondary high explosive
Iron		Yes	No	Fuel
KND	Potassium dinitramide	Yes	No	Secondary high explosive
KND	Potassium dinitramide	Yes	No	Secondary high explosive
KNF	Potassium nitroform	Yes	No	Secondary high explosive
Lead azide		Yes	No	Primary high explosive
Lead azide		Yes	No	Primary high explosive, Extremely pressure/impact sensitive, Used in ammunition primer and blasting caps
Lead picrate	2,4,6-Trinitro-lead-phenolate	Yes	No	Primary high explosive
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	Yes	No	Primary high explosive
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	Yes	No	Primary high explosive
Lead-TNP	Trinitrophloroglucinol lead salt	Yes	No	Primary high explosive
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenyl arsenous dichloride, Chlorovinylarsine dichloride	No	Yes	Blister agent

Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenyl arsenous dichloride, Chlorovinylarsine dichloride	No	Yes	Blister agent
LEXP	Liquid explosive	Yes	No	Improvised explosive
LEXP	Liquid explosive	Yes	No	"Underground" literature explosive
LEXP	Liquid explosive	Yes	No	Improvised explosive
Linseed oil		No	No	Stabilizer
Lithium carbonate		No	No	Coloring agent
LNTA	Lead nitrotetrazole	Yes	No	Primary high explosive
Magnesium		No	No	Fuel
MD	Methyldichloroarsine	No	Yes	Blister agent
Mercury azide		Yes	No	Primary high explosive
Mercury fulminate		Yes	No	Primary high explosive
Mercury fulminate		Yes	No	Primary high explosive
Mercury nitride		Yes	No	Primary high explosive
Methylene dinitramine		Yes	No	Secondary high explosive
Methylpicric acid	2,4,6-Trinitro-3-methylphenol	Yes	No	Secondary high explosive
MGP	*N*-Methyl gluconamide pentanitrate	Yes	No	Secondary high explosive
MNA	Methylnitramine	Yes	No	Secondary high explosive
MNTA	1-Methyl-3,5-dinitro-1,2,4-triazole	Yes	No	Secondary high explosive
Molotov cocktail		No	No	"Underground" literature incendiary
NDTT	5-Nitro-2(3,5-diamino-2,4,6-trinitrophenol)-1,2,4-triazole	Yes	No	Secondary high explosive
NENA	*N*-2-Nitroxyethyl nitramine	Yes	No	Secondary high explosive
NG	Nitroglycerin	Yes	No	Secondary high explosive, Used in some forms of dynamite
NINHT	2-Nitroimino-5-nitro-hexahydro-1,3,5-triazine	Yes	No	Secondary high explosive

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
Nitric Acid		No	No	Key component for many explosive manufacturing processes
Nitric Acid		No	No	Key component for many explosive manufacturing processes
Nitro starch	Nitrated cornstarch	Yes	No	Secondary high explosive
Nitro starch	Improvised explosive mixture	Yes	No	Secondary high explosive, Blasting agent, Main charge
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Smokeless powder	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Yes	No	Low explosive, Main component in smokeless powders, IED filler
Nitroform	Trinitromethane	Yes	No	Secondary high explosive
Nitroform	Trinitromethane	Yes	No	Secondary high explosive
Nitroform	Trinitromethane	Yes	No	Secondary high explosive
Nitrogen tri-iodide	Fly mines	Yes	No	Primary high explosive, Extremely pressure/impact sensitive
Nitrogen tri-iodide	Fly mines	Yes	No	Primary high explosive, Extremely pressure/impact sensitive

Nitroglycerin	NG	Yes	No	Secondary high explosive, Main charge in many military munitions
Nitroguanidine		Yes	No	Secondary high explosive, Found in triple-base smokeless powders
Nitro-PCB	3-Nitroperchlorylbenzene	Yes	No	Secondary high explosive
NMHAN	*N*-Nitro-*N*-methylhydroxy acetamidenitrate	Yes	No	Secondary high explosive
NPF	Neopentylene phosphoryl fluoridate, Neopentylene fluorophosphate	No	Yes	Nerve agent
NPSF	Neopentylene thiophosphorus fluoridate, Neopentylene fluorophosphonothioate	No	Yes	Nerve agent
NQ	Nitroglycerine	Yes	No	Secondary high explosive
NTA	3,5-Dinitro-1,2,4-triazole	Yes	No	Primary high explosive
N′-Tetranitrate		Yes	No	Secondary high explosive
NTND	2-Methyl-2-(*N*-nitro-*N*-trinitroethylamino)-1,3-propyl dinitrate	Yes	No	Secondary high explosive
NTO	3-Nitro-1,2,4-triazol-5-one	Yes	No	Secondary high explosive
NU	Nitrourea	Yes	No	Secondary high explosive, Used in first World Trade Center terrorist incident
Parlon		No	No	Binder, Color enhancer
PCB	Perchlorylbenzene	Yes	No	Secondary high explosive
PD	Phenyldichloroarsine	No	Yes	Blister agent
PEN	Pentaerythritol trinitrate	Yes	No	Secondary high explosive
PEN	Pentaerythritol trinitrate	Yes	No	Secondary high explosive
PETN	Pentaerythritol tetratrinitrate	Yes	No	Secondary high explosive, Main ingredient in det cord, Found in some plastic explosives
PETN	Pentaerythritol tetratrinitrate	Yes	No	Secondary high explosive, Main ingredient in det cord, Found in some plastic explosives

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
PETN	Pentaerithrytol tetratnitrate	Yes	No	Secondary high explosive, Main ingredient in det cord, Found in some plastic explosives
Petroleum jelly	Vaseline	No	No	Fuel, Stabilizer
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	No	Yes	Choking agent
Phosgene	Carbonyl chloride, Carbon oxychloride	No	Yes	Choking agent
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	No	Yes	Choking agent
Phosgene	Carbonyl chloride, Carbon oxychloride	No	Yes	Choking agent
Phosphorus		No	No	Fuel
Picramic acid	2-Amino-4,6-dinitrophenol	Yes	No	Secondary high explosive
Picric acid	Improvised explosive mixture	Yes	No	Secondary high explosive, Main charge-castable explosive
Picric acid		Yes	No	Secondary high explosive, Main charge-castable explosive
Picric acid	2,4,6-Trinitrophenol	Yes	No	Secondary high explosive
Picryl chloride	1-Chloro-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
Plastic explosive		Yes	No	Secondary high explosive, “Underground” literature explosive
Plastic explosive		Yes	No	Secondary high explosive, “Underground” literature explosive
Plastic explosive		Yes	No	Secondary high explosive, “Underground” literature explosive
PNT	2,3,4,5,6-Pentanitrotoluene	Yes	No	Secondary high explosive
Polyvinylchloride	PVC	No	No	Binder, Color enhancer
Potassium benzoate		No	No	Fuel

Potassium chlorate		Yes	No	Low explosive, IED filler, Black powder weapon propellant
Potassium chlorate		Yes	No	Oxidizer
Potassium chlorate		Yes	No	Oxidizer
Potassium nitrate		Yes	No	Oxidizer
Potassium perchlorate		Yes	No	Oxidizer
Potassium picrate		No	No	Whistle ingredient
PSE	Pressure-sensitive explosive	Yes	No	Impact-sensitive material
Quebrachitol nitrate	Monomethyl cyclohexanepentanitrate	Yes	No	Secondary high explosive
RDX	Cyclonite, Cyclotrimethylethylenetrinitramine	Yes	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethylethylenetrinitramine	Yes	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethylethylenetrinitramine	Yes	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethylethylenetrinitramine	Yes	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Red smoke		No	No	Red smoke produced, Screening/signaling smoke
Red smoke		No	No	Red smoke produced, Screening/signaling smoke
Red smoke		No	No	Red smoke produced, Screening/signaling smoke
Rocket fuel		No	No	Improvised projectile propellant
Rocket fuel		No	No	Improvised projectile propellant

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
Rocket fuel		No	No	Improvised projectile propellant
Rocket fuel		No	No	Secondary high explosive
Saran		No	No	Binder, Color enhancer
SATP	Di-silver aminotetrazole perchlorate	Yes	No	Primary high explosive
SEI	Self-igniting incendiary	No	No	Produces high temperature thermal effects
SEI	Self-igniting incendiary	Yes	No	"Underground" literature explosive
Shellac		No	No	Binder
Silver azide		Yes	No	Primary high explosive
Silver fulminate		Yes	No	Primary high explosive
Silver NENA		Yes	No	Secondary high explosive
Silver nitride		Yes	No	Primary high explosive
SNF	Silver nitroform	Yes	No	Primary high explosive
Sodium chlorate		Yes	No	Oxidizer
Sodium nitrate		Yes	No	Oxidizer
Sodium perchlorate		Yes	No	Oxidizer
Sodium picramate	Sodium 2-amino-4,6-dinitrophenolate, Sodium 2-amino-4,6-dinitropicrate	Yes	No	Primary high explosive
SOLEX	Acetyltrinitro-cyclotetramethylene tetramine	Yes	No	Secondary high explosive
Strontium carbonate		No	No	Coloring agent, Fire retardant
Strontium nitrate		No	No	Coloring agent, Oxidizer
Strontium oxalate		No	No	Coloring agent, Fire retardant, Stabilizer
Styphnic acid	2,4,6-Trinito-1,3-benzenediol	Yes	No	Secondary high explosive
Styphnic acid	2,4,6-Trinito-1,3-benzenediol	Yes	No	Secondary high explosive
Sub-VX	*o*-Ethyl 2-ethylthioethyl methylphosphonothioate	No	Yes	Nerve agent
Sulfur		No	No	Fuel
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	Yes	Blister agent

Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	Yes	Blister agent
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	Yes	Blister agent
Sulfur mustard II	Mustard gas II, 2,2′-Dichlorodipropyl sulfide, Bis(beta-chloropropyl) sulfide	No	Yes	Blister agent
Sulfur nitride		Yes	No	Primary high explosive
Sulfur nitride		Yes	No	Primary high explosive
Sulfur nitride		Yes	No	Primary high explosive
TA	Trinitroanisole	Yes	No	Secondary high explosive
TADA	5,5″-bi-1*H*-Tetrazole diammonium salt	Yes	No	Primary high explosive
TAEN	Triazoethanol nitrate	Yes	No	Primary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
TATP	Tri-acetone tri-peroxide	Yes	No	Terrorist explosive used extensively in the Middle East
TATP	Tri-acetone tri-peroxide	Yes	No	Terrorist explosive used extensively in the Middle East
TBA	4,4,4-Trinitrobutyraldehyde	Yes	No	Secondary high explosive
TCTNB	Trichlorotrinitrobenzene	Yes	No	Secondary high explosive
Tetraniline	Tetranitro aniline	Yes	No	Primary high explosive
Tetraniline	Tetranitro aniline	Yes	No	Primary high explosive
Tetrazide	Isocyanogen tetraazide	Yes	No	Primary high explosive
Tetryl	Nitramine, *N*-Methyl-*N*,2,4,6-tetranitrobenzenamine	Yes	No	Secondary high explosive, Military explosive main charge
Tetryl		Yes	No	Secondary high explosive, Main charge in many military munitions

(*continued*)

Common Name	Synonyms	Explosive	Chemical Warfare Agent	Use
TEX	Dintrotetraoxadiazatetracyclododecane	Yes	No	Secondary high explosive
Thermite		No	No	Produces high temperature and can melt metal
Thermite		No	No	High-temperature incendiary
Titanium		No	No	Fuel
TNA	1,3,5,7-Tetranitroadamantane	Yes	No	Secondary high explosive
TNAD	1,4,5,8-Tetranitro-1,4,5,8-tetraazadecalin	Yes	No	Secondary high explosive
TNB	4,4,4-Trinitro-1-butanol	Yes	No	Secondary high explosive
TNBCI	Trinitrobenzylchloride	Yes	No	Secondary high explosive
TND	1,4,6,9-Tetranitrodimantane	Yes	No	Secondary high explosive
TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether	Yes	No	Secondary high explosive
TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether	Yes	No	Secondary high explosive
TNM	Tertranitromethamine	Yes	No	Secondary high explosive
TNM	Tertranitromethamine	Yes	No	Secondary high explosive
TNM	Tertranitromethamine	Yes	No	Secondary high explosive
TNP	Trinitropyridine	Yes	No	
TNP	1,1,1,2-Tetranitropropane	Yes	No	Secondary high explosive
TNT	Trinitrotoluene	Yes	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Yes	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Yes	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Yes	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Yes	No	Secondary high explosive, Main charge in many military munitions

TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Yes	No	Secondary high explosive, Main charge in many military munitions
TNTC	2,4,6-Trinitro-2,4,6-triazacyclohexanone	Yes	No	Secondary high explosive
TNTPB	1,3,5-Trinitro-2,4,6-tripicrylbenzene	Yes	No	Secondary high explosive
TPG	2,4,6-Trinitrophloroglucinol	Yes	No	Secondary high explosive
TTCC	Tetraminecopper chlorate	Yes	No	Improvised military propellant
TTCC	Tetramminecopper chlorate	Yes	No	Imnprovised propellant
UDTNB	5-Ureido-1,3-diamino-2,4,6-trinitrobenzene	Yes	No	Secondary high explosive
Urea nitrate		Yes	No	Secondary high explosive, Used in first World Trade Center terrorist incident
VS	Trivinylarsenic, Tris(vinyl)arsine	No	Yes	Violent irritant
VX	TX-60, Methylphosphonothioic acid *S*-[2-[bis(1-methylethyl)amino]ethyl] *o*-ethyl ester	No	Yes	Nerve agent
White smoke		No	No	White smoke produced, Screening/signaling smoke
White smoke		No	No	White smoke produced, Screening/signaling smoke
White smoke		No	No	White smoke produced, Screening/signaling smoke
Yellow smoke		No	No	Yellow smoke produced, Screening/signaling smoke
Yellow smoke		No	No	Yellow smoke produced, Screening/signaling smoke
Yellow smoke		No	No	Yellow smoke produced, Screening/signaling smoke
Zinc		Yes	No	Fuel, Smoke ingredient

Chemical Compounds, Part 2

2

Common Name	Synonyms	Incendiary	Propellants	Use
AC	Ammonium chlorate	Yes	No	Secondary high explosive
AC	Ammonium chlorate	Yes	No	Secondary high explosive
AC	Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure	No	No	Blood agent, Extreme poison
AC	Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure	No	No	Blood agent, Extreme poison
ADBN	4,Azido-4,4-dinitro-1-butyl nitrate	No	No	Secondary high explosive
ADNB	4,Azido-4,4-dinitro-1-butyl acetate	No	No	Secondary high explosive
ADNBF	7-Amino-4,6-dinitrobenzofuroxan	No	No	Secondary high explosive
Aluminum		No	No	Fuel
Amatol		No	No	Secondary high explosive, Mixture of TNT and ammonium nitrate, Military explosive
Ammonium azide		No	No	Primary high explosive
Ammonium nitrate		No	No	Secondary high explosive
Ammonium nitrate		No	No	Secondary high explosive
Ammonium nitrate		No	No	Secondary high explosive
Ammonium nitrate		No	No	Low explosive, Primary ingredient in many types of commercial blasting materials (i.e., ANFO, dynamite, etc.)
Ammonium nitrate		No	No	Oxidizer
Ammonium perchlorate		No	No	Oxidizer
Ammonium picramate	Ammonium 2-amino-4,6-dinitrophenolate, Ammonium 2-amino-4,6-dinitropicrate	No	No	Primary high explosive
Ammonium picrate		No	No	Primary high explosive
Ammonium picrate	Explosive D	No	No	Secondary high explosive, Main charge-castable explosive
Ammonium tri-iodide	Fly mines, Nitrogen tri-iodide	No	No	Primary high explosive, Impact-sensitive material
Ammonpulver		No	No	Early form of black powder

AND	Ammonium dinitramide	No	No	Secondary high explosive
AND	Ammonium dinitramide	No	No	Secondary high explosive
AND	Ammonium dinitramide	No	No	Secondary high explosive
ANFO	Binary explosive	No	No	Secondary high explosive
A-NPNT	4-Amino-*N*,2,3,5,6-pentanitrotoluene	No	No	Secondary high explosive
ANS	ANS	No	No	"Underground" literature explosive
Anthracene		Yes	No	Smoke ingredient
Antimony		No	No	Fuel
Antimony trisulfide		No	No	Fuel
APC	Ammonium perchlorate	Yes	No	Secondary high explosive
APC	Ammonium perchlorate	Yes	No	Secondary high explosive
Arsine	Arsenic hydride, Hydrogen arsenide	No	No	Blood agent
AS-20	Distilled arsine, Phenylarsine, Diphenylarsine	No	No	Blister agent
Astrolite		No	No	Secondary high explosive, Binary high explosive, Mixture of hydrazine, aluminum, and ammonium nitrate
Azidoethyl	Tris(2-azidoethyl)amine	No	No	Secondary high explosive
Barium carbonate		No	No	Coloring agent
Barium chlorate		No	No	Oxidizer coloring agent
Barium nitrate		No	No	Oxidizer coloring agent
Barium oxalate		No	No	Coloring agent
Barium styphnate		No	No	Primary high explosive
BBC	Bromobenzylcyanide, Camite, a-Bromobenzeneacetonitrile, a-Bromo-a-tolunitrile	No	No	Lachrymatory agent, Severe irritant
BC	Cyanogen bromide, Bromide cyanide	No	No	Violent irritant
BC	Cyanogen bromide, Bromide cyanide	No	No	Violent irritant
BC	1-Bromo-2-propanone	No	No	Lachrymatory agent
BDC	Biguanide diperchlorate	No	No	Secondary high explosive

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
BDPF	Bis(1,3-diazido-2-propyl)formal	No	No	Secondary high explosive
BE	Binary explosive	No	No	Secondary high explosive
BE	Binary explosive	No	No	Secondary high explosive
Black powder	Gunpowder	No	No	Low explosive, IED filler, Black powder weapon propellant
Black powder	Gunpowder	No	No	Low explosive, IED filler
Black smoke		Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Black smoke		Yes	No	Black smoke produced, Screening/signaling smoke
Black smoke		Yes	No	Black smoke produced, Screening/signaling smoke
Boric acid		No	No	Stabilizers
Bromopicrin	Nitrobromoform, Bromoacquinite, Tribromonitromethane, Picfume bromide	No	No	Lachrymatory agent
CA	Chloroacetone, 1-Chloro-2-propanone	No	No	Lachrymatory agent
CA	Cyanogen, Ethanedinitrile, Dicyan, Oxalic acid dinitrile, Dicyanide	No	No	Blood agent, Extreme poison
CA	Chloroacetone, 1-Chloro-2-propanone	No	No	Lachrymatory agent
Calcium carbonate		No	No	Stabilizers
Calcium oxalate		No	No	Coloring agent
Carbon black	Lampblack	No	No	Fuel
CDNTA	3,5-Dinitro-1,2,4-triazole copper salt	No	No	Primary high explosive
CE	Cast explosive	No	No	Secondary high explosive
CE	Cast explosive	No	No	Secondary high explosive
CE	Cast explosive	No	No	Secondary high explosive
CE	Cast explosive	No	No	Secondary high explosive
Charcoal		No	No	Fuel

Chemical agent 4-686-293-01	Agent 1-10,1,10-bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]decane dimethobromide 1/2 hydrate	No	No	Experimental chemical agent
Chemical agent 4-686-293-02	Agent 1-8, 1,8-bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]octane dimethobromide monohydrate	No	No	Experimental chemical agent
Chemical agent 4-692-530-01	Bis{a-[(3-dimethylcarbamoxy-a-picolinyl)pyrrolidinio]}-4,4′-biacetophenone dibromide monohydrate	No	No	Experimental chemical agent
Chemical agent 4-692-530-02	Bis{a-[(3-dimethylcarbamoxyphenyl)methylamino]}-4,4′-biacetophenone dibromide monohydrate	No	No	Experimental chemical agent
Chlorine gas		No	No	Poison gas used in WW I
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	No	No	Lachrymatory agent
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	No	No	Lachrymatory agent
Chlorosarin	ClCB, Isopropylmethylphosphonochloridate, Isopropoxymethylphosphoryl chloride	No	No	Nerve agent
CK	Cyanogen chloride, Chloride cyanide	No	No	Blood agent, Extreme poison
CK	Cyanogen chloride, Chloride cyanide	No	No	Blood agent, Extreme poison
Clay		No	No	Insulator
CN	Chloroacetophenone, Mace, 2-Chloro-1-phenylethanone, 2-Chloroacetophenone	No	No	Severe irritant
CNTA	5-Nitroterazole copper salt	No	No	Primary high explosive
Comp C-1		No	No	Secondary high explosive, Plastic explosive
Copper		No	No	Coloring agent
Copper acetanarsenate		No	No	Coloring agent
Copper azide		No	No	Primary high explosive

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Copper carbonate		No	No	Coloring agent
Copper chloride		No	No	Coloring agent
Copper fulminate		No	No	Primary high explosive
Copper oxide		No	No	Coloring agent
Cryolite		No	No	Coloring agent
CS	*o*-Chlorobenzalmalononitrile, *B*,*B*-Dicyano-*o*-chlorostyrene, *o*-Chlorobenzylidenemalononitrile	No	No	Severe irritant
CX	Phosgene oxime, Dichlorofirmoxime, Hornet gas, Nettle gas	No	No	Blister agent
Cyclonite	RDX, C4	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Cyclonite	RDX, C4	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
DA	Diphenylchloroarsine	No	No	Lachrymatory agent
DANP	1,3-Diazido-2-nitrazapropane	No	No	Secondary high explosive
DATB	1,3-Diamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
DATBA	5-Carboxy-1,3-diamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
DCA	1,1-Dichloro-2-propanone, 1,1-Dichloroacetone	No	No	Severe irritant
DDD	5,7-Dintiro-5,7-diaza-1,3-dioxabicyclooctane-2-one	No	No	Secondary high explosive
DDNP	Diazodinitrophenol	No	No	Primary high explosive
DDNP	Diazodinitrophenol	No	No	Primary high explosive
Dextrin		No	No	Binder
DIANP	1,5-Diazido-3-nitrazapentane	No	No	Secondary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	No	No	Primary high explosive

Diazodinitrophenol	4,6-Dinitro-2-diazophenol	No	No	Primary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	No	No	Primary high explosive
DIM	Diimine, *N*,*N*′-bis-Isopropylethylenediimine	No	No	Severe irritant
DINA	Dintroxydiethylnitramine	No	No	Secondary high explosive
DINA	Dintroxydiethylnitramine	No	No	Secondary high explosive
DINA	Dintroxydiethylnitramine	No	No	Secondary high explosive
DITN	Diisopropylamine trinitrate	No	No	Secondary high explosive
DM	Adamsite, Phenarsazine chloride, Diphenylaminechloroarsine,10-chloro-5,10-dihydrophenarsazine	No	No	Vomiting agent
DMMD	2,4-Dinitro-2,4-diazapentane	No	No	Secondary high explosive
DNAN	Dintroxydiethylamine nitrate	No	No	Secondary high explosive
DNAT	1,1′-Dinitro-3,3′-azo-1,2,4-triazole	No	No	Secondary high explosive
DNB	4,4-Dinitro-1-butanol	No	No	Secondary high explosive
DNFA-P	1,4-Dinitrofurazano piperazine	No	No	Secondary high explosive
DNP	2,4-Dinitrophenol	No	No	Secondary high explosive
DNP	Lead picrate	No	No	Primary high explosive
DNPU	2,4-Dinitrophenylurea	No	No	Secondary high explosive
DNR	4,6-Dinitroresorcinol	No	No	Secondary high explosive
DPT	Methylenedinitrotetraazacyclooctane	No	No	Secondary high explosive
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
ED	Ethyldichloroarsine	No	No	Blister agent
ED	Ethyldichloroarsine	No	No	Blister agent
EDDN	Ethylenediamine dinitrate	No	No	Secondary high explosive
EDT	*N*,*N*′-di-2-Ethanolethylenediamine tetranitrate	No	No	Secondary high explosive
EGDN	Nitroglycol, Ethylene glycol dinitrate	No	No	Replaced nitroglyercin as "main" component in dynamites
Emulsion explosive		No	No	Secondary high explosive, Used in commercial blasting operations, "Gelled" explosive
ETN	Erythritol tetranitrate	No	No	Secondary high explosive

FI	Flash incendiary	Yes	No	"Underground" literature explosive
Fire bricks		Yes	No	"Underground" literature incendiary
Fire gel	Homemade napalm	Yes	No	"Underground" literature incendiary
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	Yes	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
FTH	Fluorotabun hydrochloride, Dimethylamidoethoxyphosphoryl fluoride-hydrochloride, *N*-Dimethylphosphoramidofluoridate-hydrochloride	No	No	Nerve agent
F-TNB	1,3,5-Trifluoro-2,4,6-trinitrobenzene	No	No	Secondary high explosive
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	No	No	Nerve agent
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	No	No	Nerve agent
GAA	Tabun-II, Diethylamidoethoxyphosphoryl cyanide, *N*-Diethylphosphoramidocyanidate	No	No	Nerve agent
GAA	Thiotabun, Dimethylamidoethoxythiophosphorus cyanide, *N*-Diethylthiophosphoramidocyanidate	No	No	Nerve agent
Gallic acid		No	No	Binder
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	No	No	Nerve agent

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	No	No	Nerve agent
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphoryl fluoride	No	No	Nerve agent
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphoryl fluoride	No	No	Nerve agent
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	No	No	Nerve agent
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	No	No	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Tri-methylpropyl ester	No	No	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Tri-methylpropyl ester	No	No	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Tri-methylpropyl ester	No	No	Nerve agent

GDCl	Chlorosoman, Chlorotrilon, Pinacolyl methylchlorophosphorusfluoridate, Methylchlorophosphorusfluoridic acid, 1,3-Tri-methylpropyl ester	No	No	Nerve agent
GDS	Thiosoman, Thiotrilon, Pinacolyl methylthiophosphorusfluoridate, Methylthiophosphorusfluoridic acid, 1,3-Tri-methylpropyl ester	No	No	Nerve agent
Gelatin explosive		No	No	Secondary high explosive, "Underground" literature explosive
GF	Cyclosarin, *o*-Cyclohexylmethylfluorophosphonate, CMPF	No	No	Nerve agent
GF	Cyclosarin, *o*-Cyclohexylmethylfluorophosphonate, CMPF	No	No	Nerve agent
Green smoke		Yes	No	Green smoke produced, Screening/signaling smoke
GS	Thiosarin, Sulfur sarin, Isopropylethylthiophosphorusfluoridate, Isopropylethylthiophosphorus fluoride, *o*-Isopropyl methylphosphonofluoridothioate	No	No	Nerve agent
Gum arabic		No	No	Binder
HBN	Hexanitrobibenzyl	No	No	Secondary high explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
Hexachlorobenzene		No	No	Color enhancer
Hexachloromethane		No	No	Smoke ingredient
Hexaditon	2,2′,4,4′,6,6′-Hexanitrodiphenylmethane	No	No	Secondary high explosive
Hexamethylenetetramine dinitrate		No	No	High explosive, "Underground" literature explosive
Hexamine	Methenamine	No	No	Used to make C4-like compounds
Hexanitrate	Sorbitol hexanitrate	No	No	Secondary high explosive
Hexol	Hexanitrobibenzyl	No	No	Secondary high explosive
HGNTA	Mercury nitrotetrazole	No	No	Primary high explosive
HMTD	Hexamethylenetriperoxide diamine	No	No	Secondary high explosive, Originally developed as a military propellant, Used by terrorists as main charge
HMX	Octagen, Tetranitro-tetraazacyclooctane	No	No	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)

HMX	Octagen, Tetranitro-tetraazacyclooctane	No	No	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine, *N*,*N*-bis(2-chloroethyl)ethanamine, 2,2′,-Dichlorodiethylamine	No	No	Blister agent
HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine, *N*,*N*-bis(2-chloroethyl)ethanamine, 2,2′,-Dichlorodiethylamine	No	No	Blister agent
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis(2-chloroethyl)methamine, 2,2′-Dichlorodiethylmethylamine	No	No	Blister agent
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis(2-chloroethyl)methamine, 2,2′-Dichlorodiethylmethylamine	No	No	Blister agent
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis(2-chloroethyl)ethaneamine, 2,2′,2′′-Trichlorotriethylamine	No	No	Blister agent
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis(2-chloroethyl)ethaneamine, 2,2′,2′′-Trichlorotriethylamine	No	No	Blister agent
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine, 2,2′,2′′-Trichlorotributylamine	No	No	Blister agent
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine, 2,2′,2′′-Trichlorotributylamine	No	No	Blister agent
HNBP	Hexanitrobiphenyl	No	No	Secondary high explosive

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
HNF	Hydrazine nitroform, Hydrazinium nitroformate	No	No	Secondary high explosive
HNF	Hydrazine nitroform, Hydrazinium nitroformate	No	No	Secondary high explosive
HNH-3	1,1,1,6,6,6-Hexanitrohexyne-3	No	No	Secondary high explosive
HNIW	Hexanitro-hexaazaisowurtzane	No	No	Secondary high explosive
HNS	Hexanitrostilbene	No	No	Secondary high explosive
HNS	Hexanitrostilbene	No	No	Secondary high explosive
HNTCAB	Hexanitrotetrachloroazobenzene	No	No	Secondary high explosive
HTH	Calcium hypochlorite	Yes	No	Produces high-temperature thermal effects
Hydrogen gas		Yes	No	Fuel/air explosive component
Hydrogen gas		Yes	No	Fuel/air explosive component
IEM	Improvised ANFO	No	No	Secondary high explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Poor man's C4	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM		No	No	Low explosive, "Underground" literature explosive
IEM		No	No	Low explosive, "Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive

IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM		Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IEM		Yes	No	Secondary high explosive, "Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised ANFO	No	No	Secondary high explosive
IEM	Improvised explosive mixture	Yes	No	"Underground" literature explosive
IIVX	Sub-VX,*S*-(2-dimethylaminomethyl)-*o*-ethyl methylphosphonothiolate, *o*-Ethyl *S*-[2-(dimethylamino)methyl]-methylphosphonothioate	No	No	Nerve agent
Inositol nitrate	Inositol hexanitrate	No	No	Secondary high explosive
Iron		Yes	No	Fuel
KND	Potassium dinitramide	No	No	Secondary high explosive
KND	Potassium dinitramide	No	No	Secondary high explosive
KNF	Potassium nitroform	No	No	Secondary high explosive
Lead azide		No	No	Primary high explosive, Extremely pressure/impact sensitive, Used in ammunition primer and blasting caps

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Lead azide		No	No	Primary high explosive, Extremely pressure/impact sensitive, Used in ammunition primer and blasting caps
Lead picrate	2,4,6-Trinitro-lead-phenolate	No	No	Primary high explosive
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	No	No	Primary high explosive
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	No	No	Primary high explosive
Lead-TNP	Trinitrophloroglucinol lead salt	No	No	Primary high explosive
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenyl arsenous dichloride, Chlorovinylarsine dichloride	No	No	Blister agent
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenyl arsenous dichloride, Chlorovinylarsine dichloride	No	No	Blister agent
LEXP	Liquid explosive	No	No	Improvised explosive
LEXP	Liquid explosive	No	No	"Underground" literature explosive
LEXP	Liquid explosive	No	No	Improvised explosive
Linseed oil		Yes	No	Stabilizer
Lithium carbonate		No	No	Coloring agent
LNTA	Lead nitrotetrazole	No	No	Primary high explosive
Magnesium		Yes	No	Fuel
MD	Methyldichloroarsine	No	No	Blister agent
Mercury azide		No	No	Primary high explosive
Mercury fulminate		No	No	Primary high explosive
Mercury fulminate		No	No	Primary high explosive
Mercury nitride		No	No	Primary high explosive
Methylene dinitramine		No	No	Secondary high explosive
Methylpicric acid	2,4,6-Trinitro-3-methylphenol	No	No	Secondary high explosive
MGP	*N*-Methyl gluconamide pentanitrate	No	No	Secondary high explosive
MNA	Methylnitramine	No	No	Secondary high explosive

MNTA	1-Methyl-3,5-dinitro-1,2,4-triazole	No	No	Secondary high explosive
Molotov cocktail		Yes	No	"Underground" literature incendiary
NDTT	5-Nitro-2(3,5-diamino-2,4,6-trinitrophenol)-1,2,4-triazole	No	No	Secondary high explosive
NENA	*N*-2-Nitroxyethyl nitramine	No	No	Secondary high explosive
NG	Nitroglycerin	No	No	Secondary high explosive, Used in some forms of dynamite
NINHT	2-Nitroimino-5-nitro-hexahydro-1,3,5-triazine	No	No	Secondary high explosive
Nitric acid		No	No	Key component for many explosive manufacturing processes
Nitric acid		No	No	Key component for many explosive manufacturing processes
Nitro starch	Nitrated cornstarch	No	No	Secondary high explosive
Nitro starch	Improvised explosive mixture	No	No	Secondary high explosive, Blasting agent, Main charge
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	Yes	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	Yes	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	Yes	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	Yes	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	Yes	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Smokeless powder	No	No	Low explosive, Main component in smokeless powders, IED filler

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	Yes	Low explosive, Main component in smokeless powders, IED filler
Nitroform	Trinitromethane	No	No	Secondary high explosive
Nitroform	Trinitromethane	No	No	Secondary high explosive
Nitroform	Trinitromethane	No	No	Secondary high explosive
Nitrogen tri-iodide	Fly mines	No	No	Primary high explosive, Extremely pressure/impact sensitive
Nitrogen tri-iodide	Fly mines	No	No	Primary high explosive, Extremely pressure/impact sensitive
Nitroglycerin	NG	No	No	Secondary high explosive, Main charge in many military munitions
Nitroguanidine		No	No	Secondary high explosive, Found in triple base smokeless powders
Nitro-PCB	3-Nitroperchlorylbenzene	No	No	Secondary high explosive
NMHAN	*N*-Nitro-*N*-methylhydroxy acetamidenitrate	No	No	Secondary high explosive
NPF	Neopentylene phosphoryl fluoridate, Neopentylene fluorophosphate	No	No	Nerve agent
NPSF	Neopentylene thiophosphorus fluoridate, Neopentylene fluorophosponothioate	No	No	Nerve agent
NQ	Nitroglycerin	No	No	Secondary high explosive
NTA	3,5-Dinitro-1,2,4-triazole	No	No	Primary high explosive
N′-Tetranitrate		No	No	Secondary high explosive
NTND	2-Methyl-2-(*N*-nitro-*N*-trinitroethylamino)-1,3-propyl dinitrate	No	No	Secondary high explosive
NTO	3-Nitro-1,2,4-triazol-5-one	No	No	Secondary high explosive
NU	Nitrourea	No	No	Secondary high explosive, Used in first World Trade Center terrorist incident
Parlon		No	No	Binder, Color enhancer
PCB	Perchorylbenzene	No	No	Secondary high explosive

PD	Phenyldichloroarsine	No	No	Blister agent
PEN	Pentaerythritol trinitrate	No	No	Secondary high explosive
PEN	Pentaerythritol trinitrate	No	No	Secondary high explosive
PETN	Pentaerythritol tetratrinitrate	No	No	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives
PETN	Pentaerythritol tetratrinitrate	No	No	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives
PETN	Pentaerithrytol tetratrinitrate	No	No	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives
Petroleum jelly	Vaseline	Yes	No	Fuel, Stabilizer
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	No	No	Choking agent
Phosgene	Carbonyl chloride, Carbon oxychloride	No	No	Choking agent
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	No	No	Choking agent
Phosgene	Carbonyl chloride, Carbon oxychloride	No	No	Choking agent
Phosphorus		Yes	No	Fuel
Picramic acid	2-Amino-4,6-dinitrophenol	No	No	Secondary high explosive
Picric acid	Improvised explosive mixture	No	No	Secondary high explosive, Main charge-castable explosive
Picric acid		No	No	Secondary high explosive, Main charge-castable explosive
Picric acid	2,4,6-Trinitrophenol	No	No	Secondary high explosive
Picryl chloride	1-Chloro-2,4,6-trinitrobenzene	No	No	Secondary high explosive
Plastic explosive		No	No	Secondary high explosive, "Underground" literature explosive
Plastic explosive		No	No	Secondary high explosive, "Underground" literature explosive

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Plastic explosive		No	No	Secondary high explosive, "Underground" literature explosive
PNT	2,3,4,5,6-Pentanitrotoluene	No	No	Secondary high explosive
Polyvinylchloride	PVC	No	No	Binder, Color enhancer
Potassium benzoate		No	No	Fuel
Potassium chlorate	Potassium chlorate	Yes	No	Low explosive, IED filler, Black powder weapon propellant
Potassium chlorate		Yes	No	Oxidizer
Potassium chlorate		No	No	Oxidizer
Potassium nitrate		Yes	No	Oxidizer
Potassium perchlorate		No	No	Oxidizer
Potassium picrate		No	No	Whistle ingredient
PSE	Pressure-sensitive explosive	No	No	Impact-sensitive material
Quebrachitol nitrate	Monomethyl cyclohexanepentanitrate	No	No	Secondary high explosive
RDX	Cyclonite, Cyclotrimethylethylene trinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethylethylene trinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethylethylene trinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethylethylene trinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Red smoke		Yes	No	Red smoke produced, Screening/signaling smoke

Red smoke		Yes	No	Red smoke produced, Screening/signaling smoke
Red smoke		Yes	No	Red smoke produced, Screening/signaling smoke
Rocket fuel		No	Yes	Improvised projectile propellant
Rocket fuel		No	Yes	Improvised projectile propellant
Rocket fuel		No	Yes	Improvised projectile propellant
Rocket fuel		No	Yes	Secondary high explosive
Saran		No	No	Binder, Color enhancer
SATP	Di-silver aminotetrazole perchlorate	No	No	Primary high explosive
SEI	Self-igniting incendiary	Yes	No	Produces high-temperature thermal effects
SEI	Self-igniting incendiary	Yes	No	"Underground" literature explosive
Shellac		No	No	Binder
Silver azide		No	No	Primary high explosive
Silver fulminate		No	No	Primary high explosive
Silver NENA		No	No	Secondary high explosive
Silver nitride		No	No	Primary high explosive
SNF	Silver nitroform	No	No	Primary high explosive
Sodium chlorate		Yes	No	Oxidizer
Sodium nitrate		No	No	Oxidizer
Sodium perchlorate		No	No	Oxidizer
Sodium picramate	Sodium 2-amino-4,6-dinitrophenolate, Sodium 2-amino-4,6-dinitropicrate	No	No	Primary high explosive
SOLEX	Acetyltrinitro-cyclotetramethylene tetramine	No	No	Secondary high explosive
Strontium carbonate		No	No	Coloring agent, Fire retardant
Strontium nitrate		No	No	Coloring agent, Oxidizer
Strontium oxalate		No	No	Coloring agent, Fire retardant, Stabilizer
Styphnic acid	2,4,6-Trinitro-1,3-benzenediol	No	No	Secondary high explosive
Styphnic acid	2,4,6-Trinitro-1,3-benzenediol	No	No	Secondary high explosive

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
Sub-VX	*o*-Ethyl 2-ethylthioethyl methylphosphonothioate	No	No	Nerve agent
Sulfur		Yes	No	Fuel
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	No	Blister agent
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	No	Blister agent
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	No	Blister agent
Sulfur mustard II	Mustard gas II, 2,2′-Dichlorodipropyl sulfide, Bis(beta-chloropropyl) sulfide	No	No	Blister agent
Sulfur nitride		No	No	Primary high explosive
Sulfur nitride		No	No	Primary high explosive
Sulfur nitride		No	No	Primary high explosive
TA	Trinitroanisole	No	No	Secondary high explosive
TADA	5,5′′-bi1*H*-Tetrazole diammonium salt	No	No	Primary high explosive
TAEN	Triazoethanol nitrate	No	No	Primary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATP	Tri-acetone tri-peroxide	No	No	Terrorist explosive used extensively in the Middle East
TATP	Tri-acetone tri-peroxide	No	No	Terrorist explosive used extensively in the Middle East
TBA	4,4,4-Trinitrobutyraldehyde	No	No	Secondary high explosive
TCTNB	Trichlorotrinitrobenzene	No	No	Secondary high explosive
Tetraniline	Tetranitro aniline	No	No	Primary high explosive
Tetraniline	Tetranitro aniline	No	No	Primary high explosive

Tetrazide	Isocyanogen tetraazide	No	No	Primary high explosive
Tetryl	Nitramine, *N*-Methyl-*N*,2,4,6-tetranitrobenzenamine	No	No	Secondary high explosive, Military explosive main charge
Tetryl		No	No	Secondary high explosive, Main charge in many military munitions
TEX	Dintrotetraoxadiazatetracyclododecane	No	No	Secondary high explosive
Thermite		Yes	No	Produces high temperature and can melt metal
Thermite		Yes	No	High-temperature incendiary
Titanium		No	No	Fuel
TNA	1,3,5,7-Tetranitroadamantane	No	No	Secondary high explosive
TNAD	1,4,5,8-Tetranitro-1,4,5,8-tetraazadecalin	No	No	Secondary high explosive
TNB	4,4,4-Trinitro-1-butanol	No	No	Secondary high explosive
TNBCI	Trinitrobenzylchloride	No	No	Secondary high explosive
TND	1,4,6,9-Tetranitrodimantane	No	No	Secondary high explosive
TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether	No	No	Secondary high explosive
TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether	No	No	Secondary high explosive
TNM	Tertranitromethamine	No	No	Secondary high explosive
TNM	Tertranitromethamine	No	No	Secondary high explosive
TNM	Tertranitromethamine	No	No	Secondary high explosive
TNP	Trinitropyridine	No	No	
TNP	1,1,1,2-Teranitropropane	No	No	Secondary high explosive
TNT	Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions

(*continued*)

Common Name	Synonyms	Incendiary	Propellants	Use
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNTC	2,4,6-Trinitro-2,4,6-triazacyclohexanone	No	No	Secondary high explosive
TNTPB	1,3,5-Trinitro-2,4,6-tripicrylbenzene	No	No	Secondary high explosive
TPG	2,4,6-Trinitrophloroglucinol	No	No	Secondary high explosive
TTCC	Tetraminecopper chlorate	No	No	Improvised military propellant
TTCC	Tetramminecopper chlorate	No	No	Imnprovised propellant
UDTNB	5-Ureido-1,3-diamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
Urea nitrate		No	No	Secondary high explosive, Used in first World Trade Center terrorist incident
VS	Trivinylarsenic, Tris(vinyl)arsine	No	No	Violent irritant
VX	TX-60, Methylphosphonothioic acid *S*-[2-[bis(1-methylethyl)amino]ethyl] *o*-ethyl ester	No	No	Nerve agent
White smoke		Yes	No	White smoke produced, Screening/signaling smoke
White smoke		Yes	No	White smoke produced, Screening/signaling smoke
White smoke		Yes	No	White smoke produced, Screening/signaling smoke
Yellow smoke		Yes	No	Yellow smoke produced, Screening/signaling smoke
Yellow smoke		Yes	No	Yellow smoke produced, Screening/signaling smoke
Yellow smoke		Yes	No	Yellow smoke produced, Screening/signaling smoke
Zinc		Yes	No	Fuel, Smoke ingredient

Chemical Compounds, Part 3

3

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
AC	Ammonium chlorate	Yes	No	Secondary high explosive
AC	Ammonium chlorate	Yes	No	Secondary high explosive
AC	Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure	No	No	Blood agent, Extreme poison
AC	Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure	No	No	Blood agent, Extreme poison
ADBN	4,Azido-4,4-dinitro-1-butyl nitrate	No	No	Secondary high explosive
ADNB	4,Azido-4,4-dinitro-1-butyl acetate	No	No	Secondary high explosive
ADNBF	7-Amino-4,6-dinitrobenzofuroxan	No	No	Secondary high explosive
Aluminum		Yes	No	Fuel
Amatol		No	No	Secondary high explosive, Mixture of TNT and Ammonium nitrate, Military explosive
Ammonium azide		No	No	Primary high explosive
Ammonium nitrate		Yes	No	Secondary high explosive
Ammonium nitrate		Yes	No	Secondary high explosive
Ammonium nitrate		Yes	No	Secondary high explosive
Ammonium nitrate		Yes	No	Low explosive, Primary ingredient in many types of commercial blasting materials (i.e., ANFO, dynamite, etc)
Ammonium nitrate		Yes	No	Oxidizer
Ammonium perchlorate		Yes	No	Oxidizer
Ammonium picramate	Ammonium 2-amino-4,6-dinitrophenolate, Ammonium 2-amino-4,6-dinitropicrate	No	No	Primary high explosive
Ammonium picrate		No	No	Primary high explosive
Ammonium picrate	Explosive D	No	No	Secondary high explosive, Main charge castable explosive

Ammonium tri-iodide	Fly mines, Nitrogen tri-iodide	No	No	Primary high explosive, Impact-sensitive material
Ammonpulver		No	No	Early form of black powder
AND	Ammonium dinitramide	No	No	Secondary high explosive
AND	Ammonium dinitramide	No	No	Secondary high explosive
AND	Ammonium dinitramide	No	No	Secondary high explosive
ANFO	Binary explosive	No	No	Secondary high explosive
A-NPNT	4-Amino-*N*,2,3,5,6-pentanitrotoluene	No	No	Secondary high explosive
ANS	ANS	No	No	"Underground" literature explosive
Anthracene		No	Yes	Smoke ingredient
Antimony		No	Yes	Fuel
Antimony trisulfide		No	Yes	Fuel
APC	Ammonium perchlorate	Yes	No	Secondary high explosive
APC	Ammonium perchlorate	Yes	No	Secondary high explosive
Arsine	Arsenic hydride, Hydrogen arsenide	No	No	Blood agent
AS-20	Distilled arsine, Phenylarsine, Diphenylarsine	No	No	Blister agent
Astrolite		No	No	Secondary high explosive, Binary high explosive, Mixture of hydrazine, aluminum, and ammonium nitrate
Azidoethyl	Tris(2-azidoethyl)amine	No	No	Secondary high explosive
Barium carbonate		No	Yes	Coloring agent
Barium chlorate		No	Yes	Oxidizer coloring agent
Barium nitrate		No	Yes	Oxidizer coloring agent
Barium oxalate		No	Yes	Coloring agent
Barium styphnate		No	No	Primary high explosive
BBC	Bromobenzylcyanide, Camite, a-Bromobenzeneacetonitrile, a-Bromo-a-tolunitrile	No	No	Lachrymatory agent, Severe irritant
BC	Cyanogen bromide, Bromide cyanide	No	No	Violent irritant

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
BC	Cyanogen bromide, Bromide cyanide	No	No	Violent irritant
BC	1-Bromo-2-propanone	No	No	Lachrymatory agent
BDC	Biguanide diperchlorate	No	No	Secondary high explosive
BDPF	Bis(1,3-diazido-2-propyl)formal	No	No	Secondary high explosive
BE	Binary explosive	No	No	Secondary high explosive
BE	Binary explosive	No	No	Secondary high explosive
Black powder	Gunpowder	No	No	Low explosive, IED filler, Black powder weapon propellant
Black powder	Gunpowder	No	No	Low explosive, IED filler
Black smoke		No	Yes	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Black smoke		No	Yes	Black smoke produced, Screening/signaling smoke
Black smoke		No	Yes	Black smoke produced, Screening/signaling smoke
Boric acid		No	Yes	Stabilizers
Bromopicrin	Nitrobromoform, Bromoacquinite, Tribromonitromethane, Picfume bromide	No	No	Lachrymatory agent
CA	Chloroacetone, 1-Chloro-2-propanone	No	No	Lachrymatory agent
CA	Cyanogen, Ethanedinitrile, Dicyan, Oxalic acid dinitrile, Dicyanide	No	No	Blood agent, Extreme poison
CA	Chloroacetone, 1-Chloro-2-propanone	No	No	Lachrymatory agent
Calcium carbonate		No	Yes	Stabilizers
Calcium oxalate		No	Yes	Coloring agent
Carbon black	Lampblack	No	Yes	Fuel
CDNTA	3,5-Dinitro-1,2,4-triazole copper salt	No	No	Primary high explosive
CE	Cast explosive	No	No	Secondary high explosive

CE	Cast explosive	No	No	Secondary high explosive
CE	Cast explosive	No	No	Secondary high explosive
CE	Cast explosive	No	No	Secondary high explosive
Charcoal		No	Yes	Fuel
Chemical agent 4-686-293-01	Agent 1-10,1,10-Bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]decane dimethobromide 1/2 hydrate	No	No	Experimental chemical agent
Chemical agent 4-686-293-02	Agent 1-8, 1,8-Bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]octane dimethobromide monohydrate	No	No	Experimental chemical agent
Chemical agent 4-692-530-01	Bis{a-[(3-dimethylcarbamoxy-a-picolinyl)pyrrolidinio]}-4,4′-biacetophenone dibromide monohydrate	No	No	Experimental chemical agent
Chemical agent 4-692-530-02	Bis{a-[(3-dimethylcarbamoxyphenyl)methylamino]}-4,4′-biacetophenone dibromide monohydrate	No	No	Experimental chemical agent
Chlorine gas		No	No	Poison gas used in WW I
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	No	No	Lachrymatory agent
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	No	Yes	Lachrymatory agent
Chlorosarin	ClCB, Isopropylmethylphosphonochloridate, Isopropoxymethylphosphoryl chloride	No	No	Nerve agent
CK	Cyanogen chloride, Chloride cyanide	No	No	Blood agent, Extreme poison
CK	Cyanogen chloride, Chloride cyanide	No	No	Blood agent, Extreme poison
Clay		No	Yes	Insulator
CN	Chloroacetophenone, Mace, 2-Chloro-1-phenylethanone, 2-Chloroacetophenone	No	No	Severe irritant
CNTA	5-Nitroterazole copper salt	No	No	Primary high explosive

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Comp C-1		No	No	Secondary high explosive, Plastic explosive
Copper		No	Yes	Coloring agent
Copper acetanarsenate		No	Yes	Coloring agent
Copper azide		No	No	Primary high explosive
Copper carbonate		No	Yes	Coloring agent
Copper chloride		No	Yes	Coloring agent
Copper fulminate		No	No	Primary high explosive
Copper oxide		No	Yes	Coloring agent
Cryolite		No	Yes	Coloring agent
CS	*o*-Chlorobenzalmalononitrile, *B*,*B*-Dicyano-*o*-chlorostyrene, *o*-Chlorobenzylidenemalononitrile	No	No	Severe irritant
CX	Phosgene oxime, Dichlorofirmoxime, Hornet gas, Nettle gas	No	No	Blister agent
Cyclonite	RDX, C4	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Cyclonite	RDX, C4	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
DA	Diphenylchloroarsine	No	No	Lachrymatory agent
DANP	1,3-Diazido-2-nitrazapropane	No	No	Secondary high explosive
DATB	1,3-Diamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
DATBA	5-Carboxy-1,3-diamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
DCA	1,1-Dichloro-2-propanone, 1,1-Dichloroacetone	No	No	Severe irritant
DDD	5,7-Dintiro-5,7-diaza-1,3-dioxabicyclooctane-2-one	No	No	Secondary high explosive
DDNP	Diazodinitrophenol	No	No	Primary high explosive
DDNP	Diazodinitrophenol	No	No	Primary high explosive

Dextrin		No	Yes	Binder
DIANP	1,5-Diazido-3-nitrazapentane	No	No	Secondary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	No	No	Primary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	No	No	Primary high explosive
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	No	No	Primary high explosive
DIM	Diimine, *N*,*N*′-bis-Isopropylethylenediimine	No	No	Severe irritant
DINA	Dintroxydiethylnitramine	No	No	Secondary high explosive
DINA	Dintroxydiethylnitramine	No	No	Secondary high explosive
DINA	Dintroxydiethylnitramine	No	No	Secondary high explosive
DITN	Diisopropylamine trinitrate	No	No	Secondary high explosive
DM	Adamsite, Phenarsazine chloride, Diphenylaminechloroarsine,10-chloro-5,10-dihydrophenarsazine	No	No	Vomiting agent
DMMD	2,4-Dinitro-2,4-diazapentane	No	No	Secondary high explosive
DNAN	Dintroxydiethylamine nitrate	No	No	Secondary high explosive
DNAT	1,1′-Dintro-3,3′-azo-1,2,4-triazole	No	No	Secondary high explosive
DNB	4,4-Dinitro-1-butanol	No	No	Secondary high explosive
DNFA-P	1,4-Dinitrofurazano piperazine	No	No	Secondary high explosive
DNP	2,4-Dinitrophenol	No	No	Secondary high explosive
DNP	Lead picrate	No	No	Primary high explosive
DNPU	2,4-Dinitrophenylurea	No	No	Secondary high explosive
DNR	4,6-Dinitroresorcinol	No	No	Secondary high explosive
DPT	Methylenedinitrotetraazacyclooctane	No	No	Secondary high explosive
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
Dynamite		No	No	Secondary high explosive, Used in commercial blasting operations
ED	Ethyldichloroarsine	No	No	Blister agent
ED	Ethyldichloroarsine	No	No	Blister agent
EDDN	Ethylenediamine dinitrate	No	No	Secondary high explosive
EDT	*N*,*N*′-di-2-Ethanolethylenediamine tetranitrate	No	No	Secondary high explosive
EGDN	Nitroglycol, Ethylene glycol dinitrate	No	No	Replaced nitroglyercin as “main” component in dynamites

Emulsion explosive		No	No	Secondary high explosive, Used in commercial blasting operations, "Gelled" explosive
ETN	Erythritol tetranitrate	No	No	Secondary high explosive
FI	Flash incendiary	No	No	"Underground" literature explosive
Fire bricks		No	No	"Underground" literature incendiary
Fire gel	Homemade napalm	No	No	"Underground" literature incendiary
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash comp		No	No	Low explosive, "Underground" literature explosive
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Pyrotechnic powder, Flashlight powder	No	No	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
FTH	Fluorotabun hydrochloride, Dimethylamidoethoxyphosphoryl fluoride-hydrochloride, *N*-Dimethylphosphoramidofluoridate-hydrochloride	No	No	Nerve agent
F-TNB	1,3,5-Trifluoro-2,4,6-trinitrobenzene	No	No	Secondary high explosive
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	No	No	Nerve agent
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	No	No	Nerve agent
GAA	Tabun-II, Diethylamidoethoxyphosphoryl cyanide, *N*-Diethylphosphoramidocyanidate	No	No	Nerve agent

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
GAA	Thiotabun, Dimethylamidoethoxythiophosphorus cyanide, *N*-Diethylthiophosphoroamidocyanidate	No	No	Nerve agent
Gallic acid		No	Yes	Binder
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	No	No	Nerve agent
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	No	No	Nerve agent
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphoryl fluoride	No	No	Nerve agent
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphoryl fluoride	No	No	Nerve agent
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	No	No	Nerve agent
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	No	No	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Trimethylpropyl ester	No	No	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Trimethylpropyl ester	No	No	Nerve agent
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Trimethylpropyl ester	No	No	Nerve agent

GDCl	Chlorosoman, Chlorotrilon, Pinacolyl methylchlorophosphorusfluoridate, Methylchlorophosphorusfluoridic acid, 1,3-Tri-methylpropyl ester	No	No	Nerve agent
GDS	Thiosoman, Thiotrilon, Pinacolyl methylthiophosphorusfluoridate, Methylthiophosphorusfluoridic acid, 1,3-tri-methylpropyl ester	No	No	Nerve agent
Gelatin explosive		No	No	Secondary high explosive, "Underground" literature explosive
GF	Cyclosarin, *O*-Cyclohexylmethylfluorophosphonate, CMPF	No	No	Nerve agent
GF	Cyclosarin, *O*-Cyclohexylmethylfluorophosphonate, CMPF	No	No	Nerve agent
Green smoke		No	Yes	Green smoke produced, Screening/signaling smoke
GS	Thiosarin, Sulfur sarin, Isopropylethylthiophosphorusfluoridate, Isopropylethylthiophosphorus fluoride, *o*-Isopropyl methyl phosphonoffluoridothioate	No	No	Nerve agent
Gum arabic		No	Yes	Binder
HBN	Hexanitrobibenzyl	No	No	Secondary high explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
HE mix		No	No	High explosive, "Underground" literature explosive
Hexachlorobenzene		No	Yes	Color enhancer
Hexachloromethane		No	Yes	Smoke ingredient
Hexaditon	2,2′,4,4′,6,6′-Hexanitrodiphenylmethane	No	No	Secondary high explosive
Hexamethylenetretramine dinitrate		No	No	High explosive, "Underground" literature explosive
Hexamine	Methenamine	Yes	No	Used to make C4-like compounds
Hexanitrate	Sorbitol hexanitrate	No	No	Secondary high explosive
Hexol	Hexanitrobibenzyl	No	No	Secondary high explosive
HGNTA	Mercury nitrotetrazole	No	No	Primary high explosive
HMTD	Hexamethylenetriperoxide diamine	No	No	Secondary high explosive, Originally developed as a military propellant, Used by terrorists as main charge

HMX	Octagen, Tetranitro-tetraazacyclooctane	No	No	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HMX	Octagen, Tetranitro-tetraazacyclooctane	No	No	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HN1	*N*-Ethyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis (2-chloroethyl)ethanamine, 2,2′-Dichlorodiethylamine	No	No	Blister agent
HN1	*N*-Ethyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis (2-chloroethyl)ethanamine, 2,2′-Dichlorodiethylamine	No	No	Blister agent
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis (2-chloroethyl)methamine, 2,2′-Dichlorodiethylmethylamine	No	No	Blister agent
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis (2-chloroethyl)methamine, 2,2′-Dichlorodiethylmethylamine	No	No	Blister agent
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis (2-chloroethyl)ethaneamine, 2,2′,2″-Trichlorotriethylamine	No	No	Blister agent
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis (2-chloroethyl)ethaneamine, 2,2′,2″-Trichlorotriethylamine	No	No	Blister agent
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis (2-chlorobutyl)butaneamine, 2,2′,2″-Trichlorotributylamine	No	No	Blister agent
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis (2-chlorobutyl)butaneamine, 2,2′,2″-Trichlorotributylamine	No	No	Blister agent
HNBP	Hexanitrobiphenyl	No	No	Secondary high explosive

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
HNF	Hydrazine nitroform, Hydrazinium nitroformate	No	No	Secondary high explosive
HNF	Hydrazine nitroform, Hydrazinium nitroformate	No	No	Secondary high explosive
HNH-3	1,1,1,6,6,6-Hexanitrohexyne-3	No	No	Secondary high explosive
HNIW	Hexanitro-hexaazaisowurtzane	No	No	Secondary high explosive
HNS	Hexanitrostilbene	No	No	Secondary high explosive
HNS	Hexanitrostilbene	No	No	Secondary high explosive
HNTCAB	Hexanitrotetrachloroazobenzene	No	No	Secondary high explosive
HTH	Calcium hypochlorite	No	No	Produces high-temperature thermal effects
Hydrogen gas		No	No	Fuel/air explosive component
Hydrogen gas		No	No	Fuel/air explosive component
IEM	Improvised ANFO	No	No	Secondary high explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Poor man's C4	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM		No	No	Low explosive, "Underground" literature explosive
IEM		No	No	Low explosive, "Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive

IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM		No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM		No	No	Secondary high explosive, "Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IEM	Improvised ANFO	No	No	Secondary high explosive
IEM	Improvised explosive mixture	No	No	"Underground" literature explosive
IIVX	Sub-VX,*S*-(2-dimethylaminomethyl) -*o*-ethyl methylphosphonothiolate, *o*-Ethyl *S*-[2-(dimethylamino)methyl]methylphosphonothioate	No	No	Nerve agent
Inositol nitrate	Inositol hexanitrate	No	No	Secondary high explosive
Iron		No	Yes	Fuel
KND	Potassium dinitramide	No	No	Secondary high explosive
KND	Potassium dinitramide	No	No	Secondary high explosive
KNF	Potassium nitroform	No	No	Secondary high explosive
Lead azide		No	No	Primary high explosive

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Lead azide		No	No	Primary high explosive, Extremely pressure/impact sensitive, Used in ammunition primer and blasting caps
Lead picrate	2,4,6-Trinitro-lead-phenolate	No	No	Primary high explosive
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	No	No	Primary high explosive
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	No	No	Primary high explosive
Lead-TNP	Trinitrophloroglucinol lead salt	No	No	Primary high explosive
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenylarsenous dichloride, Chlorovinylarsine dichloride	No	No	Blister agent
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenylarsenous dichloride, Chlorovinylarsine dichloride	No	No	Blister agent
LEXP	Liquid explosive	No	No	Improvised explosive
LEXP	Liquid explosive	No	No	"Underground" literature explosive
LEXP	Liquid explosive	No	No	Improvised explosive
Linseed oil		No	Yes	Stabilizer
Lithium carbonate		No	Yes	Coloring agent
LNTA	Lead nitrotetrazole	No	No	Primary high explosive
Magnesium		No	Yes	Fuel
MD	Methyldichloroarsine	No	No	Blister agent
Mercury azide		No	No	Primary high explosive
Mercury fulminate		No	No	Primary high explosive
Mercury fulminate		No	No	Primary high explosive
Mercury nitride		No	No	Primary high explosive
Methylene dinitramine		No	No	Secondary high explosive
Methylpcric acid	2,4,6-Trinitro-3-methylphenol	No	No	Secondary high explosive
MGP	*N*-Methyl gluconamide pentanitrate	No	No	Secondary high explosive
MNA	Methylnitramine	No	No	Secondary high explosive
MNTA	1-Methyl-3,5-dinitro-1,2,4-triazole	No	No	Secondary high explosive

Molotov cocktail		No	No	"Underground" literature incendiary
NDTT	5-Nitro-2(3,5-diamino-2,4,6-trinitrophenl)-1,2,4-triazole	No	No	Secondary high explosive
NENA	*N*-2-Nitroxyethyl nitramine	No	No	Secondary high explosive
NG	Nitroglycerin	No	No	Secondary high explosive, Used in some forms of dynamite
NINHT	2-Nitroimino-5-nitro-hexahydro-1,3,5-triazine	No	No	Secondary high explosive
Nitric acid		Yes	No	Key component for many explosive manufacturing processes
Nitric acid		Yes	No	Key component for many explosive manufacturing processes
Nitro starch	Nitrated cornstarch	No	No	Secondary high explosive
Nitro starch	Improvised explosive mixture	No	No	Secondary high explosive, Blasting agent, Main charge
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Smokeless powder	No	No	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	No	No	Low explosive, Main component in smokeless powders, IED filler

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Nitroform	Trinitromethane	No	No	Secondary high explosive
Nitroform	Trinitromethane	No	No	Secondary high explosive
Nitroform	Trinitromethane	No	No	Secondary high explosive
Nitrogen tri-iodide	Fly mines	No	No	Primary high explosive, Extremely pressure/impact sensitive
Nitrogen tri-iodide	Flymines	No	No	Primary high explosive, Extremely pressure/impact sensitive
Nitroglycerin	NG	No	No	Secondary high explosive, Main charge in many military munitions
Nitroguanidine		Yes	No	Secondary high explosive, Found in triple-base smokeless powders
Nitro-PCB	3-Nitroperchlorylbenzene	No	No	Secondary high explosive
NMHAN	*N*-Nitro-*N*-methylhydroxy acetamidenitrate	No	No	Secondary high explosive
NPF	Neopentylene phosphoryl fluoridate, Neopentylene fluorophosphates	No	No	Nerve agent
NPSF	Neopentylene thiophosphorus fluoridate, Neopentylene fluorophosponothioate	No	No	Nerve agent
NQ	Nitroglycerin	No	No	Secondary high explosive
NTA	3,5-Dinitro-1,2,4-triazole	No	No	Primary high explosive
N′-Tetranitrate		No	No	Secondary high explosive
NTND	2-Methyl-2-(*N*-nitro-*N*-trinitroethylamino)-1,3-propyl dinitrate	No	No	Secondary high explosive
NTO	3-Nitro-1,2,4-triazol-5-one	No	No	Secondary high explosive
NU	Nitrourea	No	No	Secondary high explosive, Used in first World Trade Center terrorist incident
Parlon		No	Yes	Binder, Color enhancer
PCB	Perchorylbenzene	No	No	Secondary high explosive

PD	Phenyldichloroarsine	No	No	Blister agent
PEN	Pentaerythritol trinitrate	No	No	Secondary high explosive
PEN	Pentaerythritol trinitrate	No	No	Secondary high explosive
PETN	Pentaerythritol tetratrinitrate	No	No	Secondary high explosive, Main ingredient in det cord, Found in some plastic explosives
PETN	Pentaerythritol tetratrinitrate	No	No	Secondary high explosive, Main ingredient in det cord, Found in some plastic explosives
PETN	Pentaerithrytol tetratnitrate	No	No	Secondary high explosive, Main ingredient in det cord, Found in some plastic explosives
Petroleum jelly	Vaseline	No	Yes	Fuel, Stabilizer
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	No	No	Choking agent
Phosgene	Carbonyl chloride, Carbon oxychloride	No	No	Choking agent
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	No	No	Choking agent
Phosgene	Carbonyl chloride, Carbon oxychloride	No	No	Choking agent
Phosphorus		No	Yes	Fuel
Picramic acid	2-Amino-4,6-dinitrophenol	No	No	Secondary high explosive
Picric acid	Improvised explosive mixture	No	No	Secondary high explosive, Main-charge castable explosive
Picric acid		No	No	Secondary high explosive, Main-charge castable explosive
Picric acid	2,4,6-Trinitrophenol	No	No	Secondary high explosive
Picryl chloride	1-Chloro-2,4,6-trinitrobenzene	No	No	Secondary high explosive
Plastic explosive		No	No	Secondary high explosive, "Underground" literature explosive

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Plastic explosive		No	No	Secondary high explosive, "Underground" literature explosive
Plastic explosive		No	No	Secondary high explosive, "Underground" literature explosive
PNT	2,3,4,5,6-Pentanitrotoluene	No	No	Secondary high explosive
Polyvinylchloride	PVC	No	Yes	Binder, Color enhancer
Potassium benzoate		No	Yes	Fuel
Potassium chlorate	Potassium chlorate	Yes	No	Low explosive, IED filler, Black powder weapon propellant
Potassium chlorate		No	Yes	Oxidizer
Potassium chlorate		Yes	No	Oxidizer
Potassium nitrate		No	Yes	Oxidizer
Potassium perchlorate		No	Yes	Oxidizer
Potassium picrate		No	Yes	Whistle ingredient
PSE	Pressure-sensitive explosive	No	No	Impact-sensitive material
Quebrachitol nitrate	Monomethyl cyclohexanepentanitrate	No	No	Secondary high explosive
RDX	Cyclonite, Cyclotrimethyethylenetrinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethyethylenetrinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethyethylenetrinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Cyclonite, Cyclotrimethyethylenetrinitramine	No	No	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive

Red smoke		No	Yes	Red smoke produced, Screening/signaling smoke
Red smoke		No	Yes	Red smoke produced, Screening/signaling smoke
Red smoke		No	Yes	Red smoke produced, Screening/signaling smoke
Rocket fuel		No	No	Improvised projectile propellant
Rocket fuel		No	No	Improvised projectile propellant
Rocket fuel		No	No	Improvised projectile propellant
Rocket fuel		No	No	Secondary high explosive
Saran		No	Yes	Binder, Color enhancer
SATP	Di-silver aminotetrazole perchlorate	No	No	Primary high explosive
SEI	Self-igniting incendiary	No	No	Produces high-temperature thermal effects
SEI	Self-igniting incendiary	No	No	"Underground" literature explosive
Shellac		No	Yes	Binder
Silver azide		No	No	Primary high explosive
Silver fulminate		No	No	Primary high explosive
Silver NENA		No	No	Secondary high explosive
Silver nitride		No	No	Primary high explosive
SNF	Silver nitroform	No	No	Primary high explosive
Sodium chlorate		No	Yes	Oxidizer
Sodium nitrate		No	Yes	Oxidizer
Sodium perchlorate		No	Yes	Oxidizer
Sodium picramate	Sodium 2-amino-4,6-dinitrophenolate, Sodium 2-amino-4,6-dinitropicrate	No	No	Primary high explosive
Solex	Acetyltrinitro-cyclotetramethylene tetramine	No	No	Secondary high explosive
Strontium carbonate		No	Yes	Coloring agent, Fire retardant

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
Strontium nitrate		No	Yes	Coloring agent, Oxidizer
Strontium oxalate		No	Yes	Coloring agent, Fire retardant, Stabilizer
Styphnic acid	2,4,6-Trinito-1,3-benzenediol	No	No	Secondary high explosive
Styphnic acid	2,4,6-Trinito-1,3-benzenediol	No	No	Secondary high explosive
Sub-VX	*o*-Ethyl 2-ethylthioethyl methylphosphonothioate	No	No	Nerve agent
Sulfur		No	Yes	Fuel
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	No	Blister agent
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	No	Blister agent
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	No	No	Blister agent
Sulfur mustard II	Mustard gas II, 2,2′-Dichlorodipropryl sulfide, Bis(beta-chloropropryl) sulfide	No	No	Blister agent
Sulfur nitride		No	No	Primary high explosive
Sulfur nitride		No	No	Primary high explosive
Sulfur nitride		No	No	Primary high explosive
TA	Trinitroanisole	No	No	Secondary high explosive
TADA	5,5′′-bi1*H*-Tetrazole diammonium salt	No	No	Primary high explosive
TAEN	Triazoethanol nitrate	No	No	Primary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
TATP	Tri-acetone tri-peroxide	No	No	Terrorist explosive used extensively in the Middle East
TATP	Tri-acetone tri-peroxide	No	No	Terrorist explosive used extensively in the Middle East

TBA	4,4,4-Trinitrobutyraldehyde	No	No	Secondary high explosive
TCTNB	Trichlorotrinitrobenzene	No	No	Secondary high explosive
Tetraniline	Tetranitro aniline	No	No	Primary high explosive
Tetraniline	Tetranitro aniline	No	No	Primary high explosive
Tetrazide	Isocyanogen tetraazide	No	No	Primary high explosive
Tetryl	Nitramine, *N*-Methyl-*N*,2,4,6-tetranitrobenzenamine	No	No	Secondary high explosive, Military explosive main charge
Tetryl		No	No	Secondary high explosive, Main charge in many military munitions
TEX	Dintrotetraoxadiazatetracyclododecane	No	No	Secondary high explosive
Thermite		No	No	Produces high temperature and can melt metal
Thermite		No	No	High-temperature incendiary
Titanium		No	Yes	Fuel
TNA	1,3,5,7-Tetranitroadamantane	No	No	Secondary high explosive
TNAD	1,4,5,8-Tetranitro-1,4,5,8-tetraazadecalin	No	No	Secondary high explosive
TNB	4,4,4-Trinitro-1-butanol	Yes	No	Secondary high explosive
TNBCI	Trinitrobenzylchloride	No	No	Secondary high explosive
TND	1,4,6,9-Tetranitrodimantane	No	No	Secondary high explosive
TNEN	2,2,2-Trinitroethyl-2-nitroxyethylether	No	No	Secondary high explosive
TNEN	2,2,2-Trinitroethyl-2-nitroxyethylether	No	No	Secondary high explosive
TNM	Tertranitromethamine	Yes	No	Secondary high explosive
TNM	Tertranitromethamine	Yes	No	Secondary high explosive
TNM	Tertranitromethamine	Yes	No	Secondary high explosive
TNP	Trinitropyridine	No	No	
TNP	1,1,1,2-Teranitropropane	No	No	Secondary high explosive
TNT	Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions

(*continued*)

Common Name	Synonyms	Explosive Precursor	Pyrotechnic Ingredient	Use
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	No	No	Secondary high explosive, Main charge in many military munitions
TNTC	2,4,6-Trinitro-2,4,6-triazacyclohexanone	No	No	Secondary high explosive
TNTPB	1,3,5-Trinitro-2,4,6-tripicrylbenzene	No	No	Secondary high explosive
TPG	2,4,6-Trinitrophloroglucinol	No	No	Secondary high explosive
TTCC	Tetraminecopper chlorate	No	No	Improvised military propellant
TTCC	Tetramminecopper chlorate	No	No	Imnprovised propellant
UDTNB	5-Ureido-1,3-diamino-2,4,6-trinitrobenzene	No	No	Secondary high explosive
Urea nitrate		No	No	Secondary high explosive, Used in first World Trade Center terrorist incident
VS	Trivinylarsenic, Tris(vinyl)arsine	No	No	Violent irritant
VX	TX-60, Methylphosphonothioic acid S-[2-[bis(1-methylethyl)amino]ethyl]*o*-ethyl ester	No	No	Nerve agent
White smoke		No	Yes	White smoke produced, Screening/signaling smoke
White smoke		No	Yes	White smoke produced, Screening/signaling smoke
White smoke		No	Yes	White smoke produced, Screening/signaling smoke

Yellow smoke	No	Yes	Yellow smoke produced, Screening/signaling smoke
Yellow smoke	No	Yes	Yellow smoke produced, Screening/signaling smoke
Yellow smoke	No	Yes	Yellow smoke produced, Screening/signaling smoke
Zinc	No	Yes	Fuel, Smoke ingredient

Ingredients

4

Common Name	Synonyms	Ingredients
AC	Ammonium chlorate	Ammonia gas, Carbon dioxide, Sodium chlorate
AC	Ammonium chlorate	Ammonia, Carbon dioxide, Sodium chlorate
AC		Hydrogen cyanide, Hydrocyanic acid, Prussic acid, Blausaure
ADBN	4,Azido-4,4-dinitro-1-butyl nitrate	Hydrochloric acid, Methanol, ADNB, Methylene chloride, Nitric acid, Sodium bicarbonate, Magnesium sulfate
ADNB	4,Azido-4,4-dinitro-1-butylacetate	4,4-DNB, Methylene chloride, Magnesium sulfate, Sodium azide, Sodium hydroxide, Acetyl chloride, Ethyl acetate, Hexane
ADNBF	7-Amino-4,6-dinitrobenzofuroxan	Tetraniline, Glacial acetic acid, Sodium azide
Anatol		Ammonium nitrate, TNT
Ammonium azide		Sodium azide, Ammonia
Ammonium nitrate		Sodium nitrate, Ammonia gas, Methanol, Carbon dioxide
Ammonium nitrate		Nitric acid, Ammonia, Methanol
Ammonium nitrate		Nitric acid, Ammonia gas, Methanol
Ammonium nitrate		Ammonia, Nitric acid
Ammonium perchlorate		Ammonia gas, Carbon dioxide, Sodium perchlorate
Ammonium picramate	Ammonium 2-amino-4,6-dinitrophenolate, Ammonium 1-amino-4,6-dinitropicrate	Picric acid, Ammonia, Ammonium bisulfide, Carbon disulfide
Ammonium picrate		Picric acid, Ammonia, Benzene
Ammonium picrate	Explosive D	Ammonia, Picric acid, Water
Ammonium tri-iodide	Fly mines, Nitrogen tri-iodide	Ammonia, Iodine crystals
Ammonpulver		Ammonium nitrate, Charcoal powder
AND	Ammonium dinitramide	Potassium dinitramide, Ammonium sulfate, Isopropyl alcohol, Petroleum ether
AND	Ammonium dinitramide	Nitric acid, Urea, Sulfuric acid, Nitronium tetrafluoroborate, Anhydrous ammonia, Acetonitrile, Ethyl acetate, Chloroform
AND	Ammonium dinitramide	Acetonitrile, Ammonium carbonate, Isopropyl alcohol, Nitronium tetrafluoroborate, Anhydrous ammonia, Diethyl ether, Acetone, Butanol, Ethyl acetate
ANFO	Binary explosive	Ammonium nitrate, Diesel fuel

A-NPNT	4-Amino-*N*,2,3,5,6-pentanitrotoluene	TNT, Dioxane, Hydrogen sulfide gas, Ammonia, Hydrochloric acid, Potassium iodide, Sulfuric acid, Paraformaldehyde, Methylene chloride, Nitric acid, Magnesium sulfate, Chloroform, Methanol
ANS	ANS	Ammonium nitrate, Sulfur
APC	Ammonium perchlorate	Ammonia gas, Carbon dioxide, Sodium perchlorate
APC	Ammonium perchlorate	Ammonia, Carbon dioxide, Sodium perchlorate
Arsine	Arsenic hydride, Hydrogen arsenide	Arsenic, Zinc, Hydrochloric acid
AS-20	Distilled arsine, Phenylarsine, Diphenylarsine	Benzene, Arsenic trichloride, Isopentane, Aluminum chloride, Sodium bicarbonate, Sodium sulfate
Astrolite		Ammonium nitrate, Aluminum powder, Hydrazine
Azidoethyl	Tris(2-azidoethyl)amine	Dimethylformamide, Sodium azide, Chloroform, Sodium sulfate, 2,2,2-Trichloroethylamine
Barium styphnate		Styphnic acid, Ammonia, Barium chlorate dehydrate, Acetone
BBC	Bromobenzylcyanide, Camite, *a*-Bromobenzeneactonitrile, *a*-Bromo-atolunitrile	Benzyl chloride, Sodium cyanide, Ethyl alcohol, Liquid bromine, Carbon tetrachloride, Sodium hydroxide, Sodium sulfate, Chloroform
BC	Cyanogen bromide, Bromide cyanide	Sodium hydroxide, Sodium cyanide, Bromine, Sulfuric acid
BC	Cyanogen bromide, Bromide cyanide	Sulfuric acid, Bromine, Sodium cyanide
BC	1-Bromo-2-propanone	Acetone, Sulfuric acid, Bromine, Methylene chloride
BDC	Biguanide diperchlorate	Biguanide, Ethanol, Perchloric acid, Ethyl acetate
BDPF	Bis(1,3-diazido-2-propyl)formal	1,3-Dichloro-2-propanol, Trioxane, 1,2-Dichloroethane, Sulfuric acid, Sodium bicarbonate, Dimethylsulfoxide, Sodium azide, Methylene chloride
BE	Binary explosive	Ammonium nitrate, Nitromethane
BE	Binary explosive	Ammonium nitrate, Hydrazine
Black powder	Gunpowder	Sodium nitrate, Sulfur, Charcoal
Black powder	Gunpowder	Potassium nitrate, Sulfur, Charcoal
Black smoke		Magnesium powder, Hexachlorethane, Naphthalene

(*continued*)

Common Name	Synonyms	Ingredients
Black smoke		Hexachloroethane, Alpha naphthol, Anthracene, Aluminum powder, Smokeless powder, Naphthalene
Black smoke		Black powder, Potassium nitrate, Coal tar, Charcoal powder, Paraffin
Bromopicrin	Nitrobromoform, Bromoacquinite, Tribromonitromethane, Picfume bromide	Liquid bromine, Chlorine, Nitromethane, Carbon tetrachloride, Potassium hydroxide
CA	Chloroacetone, 1-Chloro-2-propanone	Acetone, Sulfuric acid, Chlorine gas, Chloroform, Calcium chloride
CA	Cyanogen, Ethanedinitrile, Dicyan, Oxalic acid dinitrile, Dicyanide	Dimethyoxymethane, Nitrate cryohydrate, Liquid hydrogen cyanide
CA	Chloroacetone, 1-Chloro-2-propanone	Acetone, Sulfuric acid, Chlorine gas, Methylene chloride, Calcium chloride
Carbon black	Lampblack	
CDNTA	3,5-Dinitro-1,2,4-triazole copper salt	Anhydrous hydrazine, Cyanogen bromide, Isopropyl alcohol, Sodium nitrite, Sodium bicarbonate, Copper nitrate cryohydrate
CE	Cast explosive	Sodium nitrate, Sodium chloride, Sugar, Charcoal powder
CE	Cast explosive	Potassium nitrate, Sodium chlorate, Sugar, Charcoal powder
CE	Cast explosive	Potassium nitrate, Potassium chlorate, Sugar, Charcoal powder
CE	Cast explosive	Sodium nitrate, Potassium chlorate, Sugar, Charcoal powder
Chemical agent 4-686-293-01	Agent 1-10,1,10-bis[(3-dimethylcarbamoxy-apicolinyl)ethylamine]decade dimethobromide 1/2 hydrate	3-Pyridol, Ethylmethylamine, Formaldehyde, Pyridine, Dimethylcarbamoyl chloride, Sodium carbonate, Chloroform, Sodium sulfate, 1,10-Dibromodecane, Acetone, Acetonitrile, Charcoal, Ethyl acetate
Chemical agent 4-686-293-02	Agent 1-8, 1,8-bis[(3-dimethylcarbamoxy-apicolinyl)ethylamino]octane dimethobromide monohydrate	3-Pyridol, Ethylmethylamine, Formaldehyde, Pyridine, Dimethylcarbamoly chloride, Sodium carbonate, Chloroform, Sodium sulfate, 1,8-Dibromodecane, Acetone, Acetonitrile, Charcoal, Ethyl acetate

Chemical agent 4-692-530-01	Bis{*a*-[(3-dimethylcarbamoxy-apicolinyl)pyrrolidinio]}-4,4′biacetophenone dibromide monohydrate	3-Pyridol, Pyrrolidine, Formaldehyde, Pyridine, Dimethylcarbamoyl chloride, Sodium carbonate, Chloroform, Sodium sulfate, Sodium sulfate, Tetrahydrofuran, *a*,*a*′-Dibromo-4,4′-biacetophenone, Ethanol, Charcoal, Ethyl ether
Chemical agent 4-692-530-02	Bis{*a*-[(3-dimethylcarbamoxyphenol)methylamino]}-4,4′-biacetophenone dibromide monohydrate	Ethyl alcohol, 3-Dimethylcarbomoxydimethylanaline, *a*,*a*′-Dibromo-4,4′-biacetophenone, Charcoal, Ethyl acetate
Chlorine gas		Bleach, Ammonia
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	Sodium hydroxide, Nitromethane, Chlorine gas, Calcium chloride
Chloropicrin	Nitrochloroform, Acquinite, Trichloronitromethane, Picfume	Sodium hypochlorite, Nitromethane, Calcium chloride
Chlorosarin	CICB, Isopropylmethylphosphonochloridate, Isopropoxymethylphosphoryl chloride	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Isopropyl alcohol, Toluene, Pyridine, Calcium chloride
CK	Cyanogen chloride, Chloride cyanide	Sodium cyanide, Carbon tetrachloride, Ethyl alcohol, Chlorine gas
CK	Cyanogen chloride, Chloride cyanide	Sodium cyanide, Glacial acetic acid, Chlorine gas, Carbon tetrachloride
CN	Chloroacetophenone, Mace, 2-Chloro-1-phenylethanone, 2-Chloroacetophenone	Benzene, Aluminum chloride, 2-Chloroacetyl chloride, Hydrochloric acid, Sodium hydroxide, Methylene chloride, Calcium chloride, Hexanes
CNTA	5-Nitroterazole copper salt	Cupric sulfate, 5-Aminotetrazole, Sulfuric acid, Sodium nitrite
Comp C-1		RDX, Mineral oil, Lecithin
Copper azide		Sodium azide, Copper-II-sulfate pentahydrate
Copper fulminate		Copper nitrate, Nitric acid, Ethanol
CS	*o*-Chlorobenzalmalononitrile, *B,B*-Dicyano-*o*-chlorostyrene, *o*-Chlorobenzylidenemalononitrile	Methanol, Malononitrile, *o*-Chlorobenzaldehyde, Piperdine
CX	Phosgene oxime, Dichlorofirmoxime, Hornet gas, Nettle gas	Tetrahydrofuran, Hydrogen chloride, Chloropicrin, Powdered tin

(*continued*)

Common Name	Synonyms	Ingredients
Cyclonite	RDX, C4	Methenamine, Nitric acid
Cyclonite	RDX, C4	Hexamine, Nitric acid
DA	Diphenylchloroarsine	Benzene, Arsenic trichloride, Aluminum chloride, Hexanes
DANP	1,3-Diazido-2-nitrazapropane	Acetic anhydride, Nitric acid, Hexamine, Acetic acid, Methylene chloride, Sodium bicarbonate, Magnesium sulfate, Dioxane, Hydrogen chloride, Acetone, Sodium azide
DATB	1,3-Diamino-2,4,6-trinitrobenzene	*m*-phenylenediamine, Methanol, Sodium carbonate, Ethyl chloromate, Ethylene glycol dimethyl ether, Sulfuric acid, Nitric acid
DATBA	5-Carboxy-1,3-diamino-2,4,6-trinitrobenzene	2-Amino-2-methylpropane, Methylene chloride, 1,3,5-Trifluoro-2,4,6-trinitrobenzene, Potassium hydrogen carbonate, Trifluoroacetic acid, Cyanotrimethylsilane, Nitromethane, Acetonitrile, Sulfuric acid
DCA	1,1-Dichloro-2-propanone, 1,1-Dichloroacetone	Acetone, Sulfuric acid, Chlorine, Calcium chloride
DDD	5,7-Dinitro-5,7-diaza-1,3-dioxabicyclooctan-2-one	Triethylamine, Acetonitrile, Methylenedinitramine, 4,5-Dichloro-1,3-dioxolan-2-one, Silica gel, Benzene, Ethanol
DDNP	Diazodinitrophenol	Picric acid, Sulfur, Potassium nitrate, Sulfuric acid, Sodium hydroxide
DDNP	Diazodinitrophenol	Picric acid, Sulfur, Sodium nitrate, Sulfuric acid, Sodium hydroxide
DIANP	1,5-Diazido-3-nitrazapentane	DMSO, Sodium azide, DINA, Methylene chloride, Sodium sulfate, Activated alumina
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	Nitric acid, Kerosene, Ammonium picramate, Ethanol
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	Methyl green, Sodium picramate, Hydrochloric acid, Sodium nitrate
Diazodinitrophenol	4,6-Dinitro-2-diazophenol	Sodium picramate, Hydrochloric acid, Sodium nitrate
DIM	Diimine, *N*,*N*′-bis-Isopropylethylenediimine	Isopropylamine, Glyoxal, Diethyl ether
DINA	Dintroxydiethylnitramine	Nitric acid, Diethanolamine, Acetic anhydride, Acetyl chloride, Acetone, Potassium carbonate

DINA	Dintroxydiethylnitramine	Acetic anhydride, Hydrochloric acid, Diethanolamine, Methylene chloride, Nitric acid, Sodium bicarbonate
DINA	Dintroxydiethylnitramine	Nitric acid, Diethanolamine, Hydrogen chloride, Sodium bicarbonate
DITN	Diisopropylamine trinatrate	Diisopropylamine, Nitric acid
DM	Adamsite, Phenarsazine chloride, Diphenylaminechloroarsine, 10-Chloro-5,10-dihydrophenarsazine	Benzene, Pyridine, Diphenylamine, Arsenic trichloride
DMMD	2,4-Dinitro-2,4-diazapentane	Formaldehyde, Methylnitramine, Methylene chloride, Magenesium sulfate, Sulfuric acid, Chloroform, Hexane
DNAN	Dintroxydiethylamine nitrate	Nitric acid, Diethanolamine, Ethanol, Ether, Acetone
DNAT	1,1′-Dintro-3,3′-azo-1,2,4-triazole	Potassium permanganate, 3-Amino-1,2,4-triazole, Sodium hydroxide, Sodium bisulfite, Hydrochloric acid, Nitric acid, Acetic anhydride, Acetone
DNB	4,4-Dinitro-1-butanol	TNB, Methanol, Potassium iodide, Hydrochloric acid, Sodium bisulfite, Methylene chloride, Magnesium sulfate
DNFA-P	1,4-Dinitrofurazano piperazine	Hydroxylamine hydrochloride, Glyoxal, Sodium carbonate, Ethanol, Chlorine, Chloroform, Methanol, Ethylenediamine, Ethylene glycol, Sodium hydroxide, Trifluoroacetic anhydride, Nitric acid, Acetone
DNP	2,4-Dinitrophenol	Phenol, Sodium nitrite, Sodium hydroxide, Nitric acid
DNP	Lead picrate	Lead oxide, Picric acid, Alcohol
DNPU	2,4-Dinitrophenylurea	Phenylurea, Methylene chloride, Sulfuric acid, Nitric acid, Sodium bicarbonate
DNR	4,6-Dinitroresorcinol	Nitric acid, Sulfuric acid, Resorcinol diacetate, Urea
DPT	Methylenedinitrotetraazacyclooctane	Nitrourea, Formaldehyde, Sodium hydroxide, Ammonia
Dynamite		Nitroglycerin, Sodium nitrate, Nitrocellulose, Woodmeal, Potassium nitrate

(*continued*)

Common Name	Synonyms	Ingredients
Dynamite		Nitroglycerin, Ammonium oxalate, Nitrocellulose, Woodmeal, Sodium nitrate
Dynamite		Nitroglycerin, Sodium nitrate, Sodium carbonate, Woodmeal
Dynamite		Nitroglycerin, Sodium nitrate, Potassium chloride, Woodmeal, Chalk
Dynamite		Nitroglycerin, Potassium nitrate, Nitrocellulose, Woodmeal, Vaseline, Charcoal powder
Dynamite		Nitroglycerin, Potassium nitrate, Barium nitrate, Woodmeal, Starch
Dynamite		Nitroglycerin, Barium nitrate, Sodium carbonate, Woodmeal
Dynamite		Nitroglycerin, Potassium nitrate, Anhydrous sodium sulfate, Woodmeal
Dynamite		Nitroglycerin, Potassium nitrate, Ammonium oxalate, Woodmeal
Dynamite		Nitroglycerin, Potassium nitrate, Nitrocellulose, Ammonium oxalate, Woodmeal
Dynamite		Nitroglycerin, Potassium nitrate, Woodmeal
Dynamite		Nitroglycerin, Sodium nitrate, Ammonium oxalate, Woodmeal
Dynamite		Nitroglycerin, Potassium nitrate, Ammonium oxalate, Nitrocellulose, Woodmeal
Dynamite		Nitroglycerin, Potassium perchlorate, Ammonium oxalate, Nitrocellulose, Woodmeal
ED	Ethyldichloroarsine	Ethyl chloride, Magnesium metal turnings, Tetrahydrofuran, Arsenic trichloride, Hexanes
ED	Ethyldichloroarsine	Tetraethyl lead, Arsenic trichloride
EDDN	Ethylenediamine dinitrate	Ethylenediamine, Nitric acid, Ethanol
EDT	*N*,*N*′-Di-2-ethanolethylenediamine tetranitrate	Nitric acid, Ethanol, *N*,*N*′′-Diethanolethylenediamine
EGDN	Nitroglycol, Ethylene glycol	Dinitrate ethylene glycol, Nitric acid, Sulfuric acid
Emulsion explosive		Ammonium nitrate, Water, Oil, Oleic acid, Sodium hydroxide
ETN	Erythritol tetranitrate	Sulfuric acid, Erythritol, Nitric acid, Sodium carbonate, Ethanol

FI	Flash incendiary	Zinc dust, Sulfur
Fire bricks		Aluminum powder, Plaster of Paris
Fire gel	Homemade napalm	Styrofoam, Gasoline
Flash comp		Potassium chlorate, Sulfur, Sugar
Flash comp		Potassium chlorate, Sulfur, Charcoal powder
Flash comp		Potassium chlorate, Sulfur, Antimony sulfide, Potassium nitrate
Flash comp		Potassium perchlorate, Sodium salicylate
Flash comp		Potassium perchlorate, Barium nitrate, Aluminum powder
Flash comp		Potassium perchlorate, Antimony trisulfide, Lampblack, Aluminum powder, Barium carbonate
Flash comp		Potassium chlorate, Sulfur, Antimony powder
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium chlorate, Antimony sulfide, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium chlorate, Charcoal powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium permanganate, Aluminum powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Barium peroxide, Aluminum powder, Magnesium powder
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium chlorate, Red phosphorus, Sulfur, Calcium carbonate
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium perchlorate, Barium nitrate, Aluminum powder
Flash powder	Pyrotechnic powder, Flashlight powder	Sodium chlorate, Charcoal powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Sodium perchlorate, Aluminum powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium perchlorate, Aluminum powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium perchlorate, Barium nitrate, Aluminum powder
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium perchorate, Aluminum powder
Flash powder	Pyrotechnic powder, Flashlight powder	Sodium perchlorate, Aluminum powder
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium perchlorate, Magnesium powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium perchlorate, Magnesium powder
Flash powder	Pyrotechnic powder, Flashlight powder	Sodium perchlorate, Magnesium powder, Sulfur
Flash powder	Pyrotechnic powder, Flashlight powder	Sodium perchlorate, Magnesium powder
Flash powder	Pyrotechnic powder, Flashlight powder	Potassium chlorate, Gallic acid, Red gum

(*continued*)

Common Name	Synonyms	Ingredients
FTH	Fluorotabun hydrochloride, Dimethylamidoethoxyphosphoryl fluoride hydrochloride, *N*-Dimethylphosphoramidofluoridatehydrochloride	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium fluoride, Ethyl alcohol, Chloroform, Petroleum ether
F-TNB	1,3,5-Trifluoro-2,4,6-trinitrobenzene	Sulfuric acid, Potassium nitrate, 1,3,5-Trifluorobenzene, Methylene chloride, Hexane, Charcoal, Sodium sulfate
GA	Tibun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile
GA	Tabun, Dimethylamidoethoxyphosphoryl cyanide, Dimethylphosphoramidocyanidate	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile, Pyridine
GAA	Tabun-II, Diethylamidoethoxyphosphoryl cyanide, *N*-Diethylphosphoramidocynidate	Phosphorus oxytrichloride, Ethylene dichloride, Ethylene dichloride, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile
GAA	Thiotabun, Dimethylamidoethoxythiophosphorus cyanide, *N*-Diethylthiophosphoroamidocyanidate	Thiophosphorus trichloride, Trichloroethylene, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile
Gallic acid		
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Isopropyl alcohol, Silica gel, Isopropyl ether, Toluene
GB	Sarin, Trilon 46, Isopropylmethylphosphonofluoridate, Isopropylmethylphosphoryl fluoride	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Isopropyl alcohol, Silica gel, Isopropyl ether
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphyl fluoride	Phosphorus trichloride, Aluminum chloride, Ethyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Isopropyl alcohol, Silica gel, Isopropyl ether
GBE	Sarin-ethyl, Sarin-II, Isopropylethylphosphonofluoridate, Isopropylethylphosphyl fluoride	Phosphorus trichloride, Aluminum chloride, Ethyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Isopropyl alcohol, Silica gel, Isopropyl ether, Toluene

GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isoproproxy-2-propylphosphoryl fluoride	Phosphorus trichloride, Aluminum chloride, Isopropyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Isopropyl alcohol, Silica gel, Isopropyl ether, Toluene
GBI	Sarin-isopropyl, Sarin-III, Isopropyl-2-propylphosphonofluoridate, Isopropoxy-2-propylphosphoryl fluoride	Phosphorus trichloride, Aluminum chloride, Isopropyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Isopropyl alcohol, Silica gel, Isopropyl ether
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Trimethylpropyl ester	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Pinacolyl alcohol, Silica gel, Isopropyl ether, Toluene
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid, 1,2,2-Trimethylpropyl ester	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Pinacolyl alcohol, Silica gel, Isopropyl ether
GD	Soman, Trilon, Pinacolyl methylphosphonofluoridate, Methylphosphonofluoridic acid 1,2,2-Trimethylpropyl ester	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Pinacolyl alcohol, Silica gel, Isopropyl ether, Toluene
GDCI	Chlorosoman, Chlorotrilon, Pinacolyl methylchlorophosphorusfluoridate, Methylchlorophosphorusfluoridic acid, 1,3-Trimethylpropyl ester	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Pinacolyl alcohol, Toluene, Pyridine, Calcium chloride
GDS	Thiosoman, Thioytrilon, Pinacolyl methylthiophosphorusfluoridate, Methylthiophosphorusfluoridic acid, 1,3-Trimethylpropyl ester	Phosphorus trichloride, Methyl disulfide, Methyl iodide, Toluene, Sodium fluoride
Gelatin explosive		Nitroglycol, Nitrocellulose, Potassium nitrate, Flour
GF	Cyclosarin, *o*-Cyclohexylmethylfluorophosphonate, CMPF	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Cyclohexanol, Silica gel, Isopropyl ether, Toluene

(*continued*)

Common Name	Synonyms	Ingredients
GF	Cyclosarin, *o*-Cyclohexylmethylfluorophosphonate, CMPF	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Cyclohexanol, Silica gel, Isopropyl ether
Green smoke		Black powder, Potassium nitrate, Red arsenic, Sulfur, Antimony
GS	Thiosarin, Sulfur sarin, Isopropylethylthiophosphorusfluoridate, Isopropylethylthiophosphorus fluoride, *o*-Isopropyl methylphosphonoffluoridothioate	Phosphorus trichloride, Methyl disulfide, Methyl iodide, Toluene, Sodium fluoride, Isopropyl alcohol
HBN	Hexanitrobibenzyl	Benzene, Methanol, TNT, Sodium hydroxide, Sodium hypochlorite
HE mix		Potassium bichromate, Antimony sulfide
HE mix		Potassium permanganate, Powdered sugar
HE mix		Barium chlorate, Paraffin wax
HE mix		Potassium perchlorate, Cane sugar
HE mix		Sodium nitrate, Sulfur
HE mix		Sodium peroxide, Sulfur
HE mix		Sodium chlorite, Aluminum powder
HE mix		Magnesium chlorate, Aluminum powder
HE mix		Guanidine nitrate, Antimony powder
HE mix		Ammonium nitrate, Gasoline
Hexadition	2,2′,4,4′,6,6′-Hexanitrodiphenylmethane	TNT, Tetradrofuran, Potassium hydroxide, Picryl choride, Dimethylsulfoxide, Hydrochloric acid, Acetonitrile, Methanol
Hexamethylenetretramine dinitrate		Hexamethylenetetramine, Nitric acid, Acetone
Hexamine	Methenamine	Ammonia, Formaldehyde
Hexanitrate	Sorbitol hexanitrate	Nitric acid, Sulfuric acid, Sorbitol, Ethanol, Sodium carbonate
Hexol	Hexanitrobibenzyl	TNT, Benzene, Methanol, Sodium hypochlorite, Sodium hydroxide
HGNTA	Mercury nitrotetrazole	Sodium hydroxide, CNTA, Mercury II nitrate, Nitric acid

HMTD	Hexamtheylenetriperoxide diamine	Hexamethylenetetramine, Citric acid, Hydrogen peroxide
HMX	Octogen, Tetranitrotetraazacyclooctane	Nitric acid, Phosphorus pentoxide, Solex
HMX	Octogen, Tetranitrotetraazacyclooctane	Nitric acid, Ammonium nitrate, Paraformaldehyde, Hexamine, Acetone, Acetic acid, Acetic anhydride
HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine, *N*,*N*-bis(2-chloroethyl)ethanamine, 2,2′-Dichlorodiethylamine	Diethanolethylamine, Thionly chloride, Chloroform, Acetone, Sodium carbonate
HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine, *N*,*N*-bis(2-chloroethyl)ethanamine, 2,2′-Dichlorodiethylamine	Diethanolethylamine, Hydrochloric acid, Chloroform, Acetone, Sulfur, Chlorine gas, Sodium carbonate
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis (2-chloroethyl)methamine, 2,2′-Dichlorodiethylmethylamine	Diethanolmethylamine, Hydrochloric acid, Chloroform, Sulfur, Chlorine gas, Sodium carbonate
HN2	*N*-Methyl-2,2′ di(chloroethyl)amine, *N*,*N*-bis(2-chloroethyl)methamine, 2,2′-Dichlorodiethylmethylamine	Diethanolmethylamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis (2-chloroethyl)ethaneamine, 2,2′2′′-Trichlorotriethylamine	Triethanolamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate
HN3	Tris(beta-chloroethyl)amine, 2-Chloro-*N*,*N*-bis (2-chloroethyl)ethaneamine, 2,2′2′′-Trichlorotriethylamine	Triethanolamine, Thinyl chloride, Chloroform, Acetone, Sodium carbonate
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis (2-chlorobutyl)butaneamine, 2,2′,2′′-Trichlorotributylamine	Tributanolamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate
HN4	Tris(beta-chlorobutyl)amine, 2-Chloro-*N*,*N*-bis (2-chlorobutyl)butaneamine, 2,2′,2′′-Trichlorotributylamine	Tributanolamine, Hydrochloric acid, Chloroform, Acetone, Sulfur, Chlorine gas, Sodium carbonate
HNBP	Hexanitrobiphenyl	Picryl chloride, Ethylene dichloride, Copper powder, Acetone
HNF	Hydrazine nitroform, Hydrazinium nitroformate	Nitroform, Diethyl ether, Hydrazine
HNF	Hydrazine nitroform, Hydrazinium nitroformate	Nitroform, Methanol, Hydrazine

(*continued*)

Common Name	Synonyms	Ingredients
HNH-3	1,1,1,6,6,6-Hexanitrohexyne-3	Nitroform, Methyl acetate, Silver-I oxide, 1,4-Dibromobutyne-2, Chloroform
HNIW	Hexanitrohexaazaisowurtzane	Glyoxal, Benzylamine, Formic acid, Acetonitrile, Acetic anhydride, Palladium on charcoal, Bromobenezene, Chloroform, Sulfolane, Nitrosonium tetrafluoroborate, Ethyl acetate
HNS	Hexanitrostilbene trinitrobenzyl chloride	Triethylbenzyl ammonium chloride, Methylene chloride, Sodium hydroxide, Methanol
HNS	Hexanitrostilbene	TNT, DMSO, Oxygen gas, Sodium benzoate, Hydrochloric acid, Methanol, Acetone
HNTCAB	Hexanitrotetrachloroazobenzene	Nitric acid, Sulfuric acid, 3,5-Dichloraniline
HTH	Calcium hypochlorite	Hypochlorites (calcium/sodium), Glycerin
Hydrogen gas		Hydrochloric acid, Aluminum metal
Hydrogen gas		Sodium hydroxide, Aluminum metal
IEM	Improvised ANFO	Sodium chlorate, Fuel oil
IEM	Improvised explosive mixture	Aluminum, Sulfur, Starch
IEM	Improvised explosive mixture	Sugar, Sodium peroxide
IEM	Improvised explosive mixture	Sulfuric acid, Nitric acid, Methanol (methyl alcohol)
IEM	Poor-man's C4	Potassium chlorate, Petroleum jelly
IEM	Improvised explosive mixture	Potassium permanganate, Sugar, Aluminum powder
IEM	Improvised explosive mixture	Potassium permanganate, Sugar, Magnesium powder
IEM	Improvised explosive mixture	Sugar, Potassium nitrate, Ferric oxide
IEM	Improvised explosive mixture	Sodium carbonate, Sulfur
IEM	Improvised explosive mixture	Potassium chlorate, Aluminum powder
IEM		Sodium chlorate, Paraffin
IEM		Potassium chlorate, Diesel fuel, Paraffin
IEM	Improvised explosive mixture	Potassium chlorate, Sugar
IEM	Improvised explosive mixture	Potassium chlorate, Sulfur, Charcoal
IEM	Improvised explosive mixture	Potassium chlorate, Charcoal powder, Sulfur
IEM	Improvised explosive mixture	Potassium permanganate, Sulfur, Aluminum powder

IEM	Improvised explosive mixture	Potassium chlorate, Sulfur
IEM	Improvised explosive mixture	Barium peroxide, Magnesium powder
IEM		Potassium chlorate, Sugar
IEM	Improvised explosive mixture	Ammonium perchlorate, Aluminum powder, Iron oxide
IEM	Improvised explosive mixture	Potassium nitrate, Magnesium powder
IEM	Improvised explosive mixture	Potassium chlorate, Sulfur, Aluminum powder
IEM	Improvised explosive mixture	Potassium permanganate, Sugar
IEM	Improvised explosive mixture	Potassium chlorate, Sulfur, Magnesium powder
IEM	Improvised explosive mixture	Potassium permanganate, Sulfur, Magnesium powder
IEM	Improvised explosive mixture	Potassium permanganate, Sulfur
IEM		Potassium permanganate, Sugar
IEM	Improvised explosive mixture	Sodium nitrate, Magnesium powder, Sulfur
IEM	Improvised explosive mixture	Potassium chlorate, Magnesium powder
IEM	Improvised ANFO	Potassium chlorate, Fuel oil
IEM	Improvised explosive mixture	Potassium nitrate, Iron powder
IIVX	Sub-VX,S-(2-dimethylaminomethyl)-*o*-ethyl methylphosphonothiolate, *o*-Ethyl S-[2-(dimethylamino)methyl]methylphosphonothioate	Diethyl ether, Dichloromethylphosphine, Ethyl alcohol, *N*,*N*-Diethylamine, 2-Dimethylaminomethanol, Rhombic sulfur
Inositol nitrate	Inositol hexanitrate	Quebrachitol, Hydrochloric acid, Ethanol, Diethyl ether, Nitric acid, Sulfuric acid, Sodium bicarbonate, Sodium sulfate
Iron		
KND	Potassium dinitramide	Sulfamic acid, Potassium hydroxide, Ethanol, Nitric acid, Sulfuric acid, Acetone, Isopropyl alcohol
KND	Potassium dinitramide	Nitronium tetrafluoroborate, Acetonitrile, Ammonium carbonate, Potassium carbonate, Diethyl ether, Acetone, Ethyl acetate, Butanol
KNF	Potassium nitroform	Dioxane, Potassium nitrite, Potassium bicarbonate, Tetranitromethane
Lead azide		Lead acetate, Sodium azide

(*continued*)

Common Name	Synonyms	Ingredients
Lead azide		Sodium azide, Lead acetate, Water
Lead picrate	2,4,6-Trinitro-lead-phenolate	Picric acid, Sodium hydroxide, Lead nitrate
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	Styphinic acid, Sodium hydroxide, Lead-II-nitrate
Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate	Styphinic acid, Magnesium carbonate, Lead nitrate, Nitric acid
Lead TNP	Trinitrophloroglucinol lead salt	Phloroglucinol, Glacial acetic acid, Sodium nitrite, Lead nitrate
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenyl arsenous dichloride, Chlorovinylarsine dichloride	Acetylene, Arsenic trichloride, Mercuric chloride, Hydrochloric acid
Lewisite	2-Chlorovinyldichloroarsine, 2-Chloroethenyl arsenous dichloride, Chlorovinylarsine dichloride	Acetylene, Arsenic trichloride, Aluminum chloride
LEXP	Liquid explosive	Aluminum powder, Tetrachlorethylene
LEXP	Liquid explosive	Nitric acid, Nitrobenzene
LEXP	Liquid explosive	Aluminum powder, Nitrobenzene, Carbon tetrachloride
Linseed oil		
Lithium carbonate		
LNTA	Lead nitrotetrazole	CNTA, Hydrogen sulfide, Benzene, Lead-II-hydroxide
Magnesium		
MD	Methyldichloroarsine	Methylene chloride, Magnesium metal turnings, Tetrahydrofuran, Arsenic trichloride, Hexanes
Mercury azide		Mercury-II-nitrate, Sodium azide
Mercury fulminate		Mercury, Nitric acid, Ethanol
Mercury fulminate		Mercury, Nitric acid, Alcohol
Mercury nitride		Ammonia, Mercury oxide, Nitric acid
Methylene dinitramine		Nitric acid, Methylene diformamide, Acetic anhydride, Formic acid, Benzene
Methylpcric acid	2,4,6-Trinitro-3-methylphenol	*m*-Cresol, Sodium nitrite, Sodium hydroxide, Nitric acid
MGP	*N*-Methyl gluconamide pentanitrate	Nitric acid, *N*-Methyl gluconamide, Acetic anhydride, Sodium bicarbonate, Methanol
MNA	Methylnitramine	Dimethylurea, Nitric acid, Sulfuric acid, Methylene chloride, Sodium carbonate

MNTA	1-Methyl-3,5-dinitro-1,2,4-triazole	Anhydrous hydrazine, Cyanogen bromide, Isopropyl alcohol, Sodium nitrite, Sodium bicarbonate, Copper nitrate trihydrate, Nitric acid, Diethyl ether
Molotov cocktail		Gasoline, Sulfuric acid, Potassium chlorate, Sugar
NDTT	5-Nitro-2(3,5-diamino-2,3,6-trinitrophenl)-1,2,4-triazole	Potassium nitrate, Sulfuric acid, 1,3,5-Trifluorobenzene, Methylene chloride, Hexane, Tert-butylamine, Trifluoroacetic acid, 1,2-Dichloroethane, 3-Amino-1,2,4-traizole, Glacial acetic acid, Sodium nitrite, Urea, Ethyl acetate, Dimethylformaide, Diethyl ether, Sodium sulfate, Methanol
NENA	*N*-2-Nitroxyethyl nitramine	Ethanolamine, Diethyl ether, Ethyl chlorocarbonate, Sodium hydroxide, Magnesium sulfate, Nitric acid, Anhydrous ammonia
NG	Nitroglycerin	Nitric acid, Sulfuric acid, Glycerin, Sodium bicarbonate
NINHT	2-Nitroimino-5-nitro-hexahydro-1,3,5-triazine	Hydrochloric acid, Nitroguanidine, Hexamine, Methanol, Sodium nitrite, Nitric acid
Nitric acid		Potassium nitrate, Sulfuric acid, Water
Nitric acid		Sodium nitrate, Sulfuric acid, Water
Nitro starch	Mitrated cornstarch	Nitric acid, Sulfuric acid, Cornstarch, Ammonia
Nitro starch	Improvised explosive mixture	Starch, Sulfuric acid, Nitric acid
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Nitric acid, Sulfuric acid, Cellophane, Cotton, Sodium bicarbonate
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Nitric acid, Sulfuric acid, Cotton, Sodium bicarbonate
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Nitric acid, Sulfuric acid, Newspaper, Sodium bicarbonate
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Nitric acid, Sulfuric acid, Wood cellulose, Sodium bicarbonate
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Phosphorus pentoxide, Methylene chloride, Nitric acid, Cotton balls, Sodium bicarbonate
Nitrocellulose	Smokeless powder	Cellulose, Sulfuric acid, Nitric acid, Water
Nitrocellulose	Nitrated cellulose, Gun cotton, Cellulosetrinitrate	Nitric acid, Sulfuric acid, Wood pulp, Sodium hydroxide, Sodium bicarbonate, Carbon disulfide

(*continued*)

Common Name	Synonyms	Ingredients
Nitroform	Trinitromethane	Nitric acid, Isopropyl alcohol, Methylene chloride, Calcium chloride
Nitroform	Trinitromethane	Methanol, Potassium nitrate, Potassium carbonate, Tetranitromethane, Hydrogen chloride, Methylene chloride, Diethyl ether
Nitroform	Trinitromethane	Methanol, Sodium nitrate, Sodium bicarbonate, Tetranitromethane, Hydrochloric acid, Methylene chloride, Calcium sulfate
Nitrogen tri-iodide	Fly mines	Ammonium nitrate, Chlorine gas
Nitrogen tri-iodide	Fly mines	Anhydrous ammonia, Chlorine gas, Water
Nitroglycerin	NG	Glycerin, Sulfuric acid, Nitric acid
Nitroguanidine		Guanidine, Sulfuric acid, Water
Nitro-PCB	3-Nitroperchlorylbenzene	Nitric acid, Sulfuric acid, Perchlorylbenzene, Benzene, Petroleum ether
NMHAN	*N*-Nitro-*N*-methylhydroxy acetamidenitrate	Nitric acid, Sulfuric acid, *N*-Methylhydroxy acetamide
NPF	Neopentylene phosphoryl fluoridate, Neopentylene fluorophosphate	Phosphorus oxytrichloride, Benzene, Neopentyl glycol, Pyridine, Petroleum ether, Ammonium fluoride
NPSF	Neopentylene thiophosphorus fluoridate, Neopentylene fluorophosponothioate	Thiophosphorus trichloride, Benzene, Neopentyl glycol, Pyridine, Petroleum ether, Ammonium fluoride
NQ	Nitroglycerine	Nitric acid, Sulfuric acid, Glycerol, Magnesium sulfate
NTA	3,5-Dinitro-2,3,4-triazole	Anhydrous hydrazine, Cyanogen bromide, Isopropyl alcohol, Sodium nitrite, Sodium bicarbonate, Copper nitrate trihydrate, Nitric acid, Diethyl ether
N′-Tetranitrate		Ethylenediamine, Ethylene oxide, Phosphorus pentoxide, Nitric acid, Ammonia, Diethyl ether
NTND	2-Methyl-2-(*N*-nitro-*N*-trinitroethylamino)-1,3-propyl dinitrate	2-Methyl-2-amino-1,3-propanediol, Nitroform, Formaldehyde, Ethanol, Magnesium sulfate, Acetic anhydride, Nitric acid, Sodium bicarbonate
NTO	3-Nitro-1,2,4-triazol-5-one	Semicarbazide hydrochloride, Formic acid, Nitric acid

NU	Nitrourea	Sulfuric acid, Urea, Nitric acid
Parlon		
PCB	Perchorylbenzene	Ammonium chloride, Benzene, Perchloryl fluoride
PD	Phenyldichloroarsine	Benzene, Arsenic trichloride, Aluminum chloride
PEN	Pentaerythritol trinitrate	Pentaerythritol, Nitric acid, Sulfuric acid, Methylene chloride, Urea, Sodium bicarbonate, Diethyl ether
PEN	Pentaerythritol trinitrate	Pentaerythritol, Nitric acid, Sulfuric acid, Methylene chlorine, Urea, Sodium bicarbonate
PETN	Pentaerythritol tetratrinitrate	Pentaerythritol, Nitric acid, Acetone, Ethanol
PETN	Pentaerythritol tetratrinitrate	Pentaerythritol, Nitric acid, Acetone, Sulfuric acid, Sodium carbonate
PETN	Pentaerithrytol tetratnitrate	Pentaerythrite, Nitric acid
Petroleum jelly	Vaseline	
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	Chlorine gas, Activated charcoal, Carbon monoxide
Phosgene	Carbonyl chloride, Carbon oxychloride	Sulfuric acid, Carbon tetrachloride
Phosgene	Carbonyl chloride, Carbonic dichloride, Chloroformyl chloride	Chlorine gas, Carbon monoxide
Phosgene	Carbonyl chloride, Carbon oxychloride	Sulfur trioxide, Carbon tetrachloride
Phosphorus		
Picramic acid	2-Amino-4,6-dinitrophenol	Glacial acetic acid, Ammonium picramic acid
Picric acid	Improvised explosive mixture	Phenol, Sulfuric acid, Nitric acid, Water
Picric acid		Aspirin, Sulfuric acid, Potassium nitrate, Alcohol
Picric acid	2,4,6-Trinitrophenol	Phenol, Sodium hydroxide, Sodium nitrite, Nitric acid
Picryl chloride	1-Chloro-2,4,6-trinitrobenzene	Chlorobenzene, Potassium nitrate, Sulfuric acid, Acetone, Methanol
Plastic explosive		RDX, Paraffin, Bearing grease
Plastic explosive		Potassium chlorate, Petroleum jelly, Aluminum powder
Plastic explosive		RDX, Nitroglycerin, Petroleum jelly

(*continued*)

Common Name	Synonyms	Ingredients
PNT	2,3,4,5,6-Pentanitrotoluene	TNT, Glacial acetic acid, Iron powder, Sulfuric acid, Nitric acid, Anisole, Methylene chloride, Magnesium sulfate
Polyvichloride	PVC	
Potassium chlorate		Potassium chloride, Bleach (Calcium hypochlorite)
Potassium chlorate		Potassium chloride, Bleach
PSE	Pressure-sensitive explosive	Red phosphorus, Potassium chlorate, Alcohol
Quebrachitol nitrate	Monomethyl cyclohexanepentanitrate	Quebrachitol, Nitric acid, Sulfuric acid, Sodium bicarbonate
RDX	Clyclonite, Cyclotrimethyethylenetrinitramine	Hexamine, Nitric acid, Sodium nitrate
RDX	Clyclonite, Cyclotrimethyethylenetrinitramine	Propionitrile, Sulfuric acid, Trioxane, Nitric acid
RDX	Clyclonite, Cyclotrimethyethylenetrinitramine	DAPT, Acetic acid, Ammonium nitrate, Nitric acid, Acetic anhydride
RDX	Clyclonite, Cyclotrimethyethylenetrinitramine	1,3,5-Tripropionylhexahydro-*s*-triazine, Nitric acid
Red smoke		Potassium chlorate, Diethylaminorosidone, Powdered sugar
Red smoke		Potassium chlorate, Methylaminoanthraquinone, Sodium bicarbonate, Sulfur
Red smoke		Potassium perchlorate, Antimony sulfide, Rhodamine red, Dextrin
Rocket fuel		Ammonium nitrate, Ammonium perchlorate, Epoxy resin, Aluminum powder
Rocket fuel		Ammonium nitrate, Ammonium perchlorate, Polyester resin, Charcoal powder
Rocket fuel		Ammonium perchlorate, Aluminum powder, Ground PVC in tetrahydrofuran
Rocket fuel		Ammonium nitrate, Aluminum powder, Polyester resin, Ammonium bichromate, Charcoal powder
SATP	Di-silver aminotetrazole perchlorate	Silver perchlorate, 5-Aminotetrazole, Perchloric acid
SEI	Self-igniting incendiary	Glycerin, Potassium permanganate
SEI	Self-igniting incendiary	Potassium permanganate, Glycerin
Silver azide		Silver nitrate, Nitric acid, Ethanol
Silver fulminate		Silver nitrate, Nitric acid, Ethanol

Silver NENA		Silver nitrate, NENA, Ethanol, Diethyl ether
Silver nitride		Ammonia, Silver oxide
SNF	Silver nitroform	Nitroform, Ethyl ether, Silver-I-oxide
Sodium picramate	Sodium 2-amino-4,6-dinitrophenolate, Sodium 2-amino-4,6-dinitropicrate	Picric acid, Sodium hydroxide, Ammonium bisulfide, Carbon disulfide
SOLEX	Acetyltrinitro-cyclotetramethylene tetramine	TAT, Nitric acid, Phosphorus pentoxide
Styphnic acid	2,4,6-Trinito-1,3-benzenediol	Resorcinol, Nitric acid, Sodium nitrite, Sulfuric acid
Styphnic acid	2,4,6-Trinito-1,3-benzenediol	Resorcinol, Nitric acid, Sodium nitrite
Sub-VX	*o*-Ethyl 2-ethylthioethyl methylphosphonothioate	Diethyl ether, Dichloromethylphosphine, Ethyl alcohol, *N*,*N*-Diethylamine, 2-Ethylthioethanol, Rhombic sulfur
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	Ethylene Chlorohydrin, Sodium sulfide, Nonahydrate, Hydrochloric acid
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	Ethylene gas, Sulfur, Methylene chloride, Activated charcoal, Chlorine gas
Sulfur mustard	Mustard gas, Kampfstoff, Yperite, 2,2′-Dichlorodiethyl sulfide	Ethylene gas, Sulfur dichloride, Methylene chloride, Activated charcoal
Sulfur mustard II	Mustard gas II, 2,2′-Dichlorodipropryl sulfide, Bis(beta-chloropropryl) sulfide	Propylene chlorohydrin, Sodium sulfide nonahydrate, Hydrochloric acid
Sulfur nitride		Toluene, Sulfur, Ammonia, Chlorine
Sulfur nitride		Benzene, Sulfur chloride, Ammonia
Sulfur nitride		Toluene, Sulfur chloride, Ammonia
TA	Trinitroanisole	Picryl chloride, Methanol, Potassium hydroxide
TADA	5,5′′-Bi-1*H*-Tetrazole diammonium salt	Hydrogen cyanide, Sodium azide, Copper-II-sulfate pentahydrate, Hydrogen peroxide, Formic acid, Ammonium chloride
TAEN	Triazoethanol nitrate	Nitric acid, Sulfuric acid, Triazoethanol, Sodium bicarbonate
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	1,3,5-Trichloro-2,4,6-trinitrobenzene, Xylene, Ammonia gas, Hexane
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	3,5-Dichloroanisole, Nitric acid, Sulfuric acid, Ammonia gas, Toluene, Acetone
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	1,3,5-Trichloro-2,4,6-trinitrobenzene, Benzene, Ammonia gas

(*continued*)

Common Name	Synonyms	Ingredients
TATB	1,3,5-Triamino-2,4,6-trinitrobenzene	1,3,5-Trichloro-2,4,6-trinitrobenzene, Dioxane, Ammonia gas
TATP	Triacetone triperoxide	Acetone, Hydrogen peroxide, Hydrochloric acid
TATP	Triacetone triperoxide	Acetone, Hydrogen peroxide, Sulfuric acid
TBA	4,4,4-Trinitrobutryaldehyde	Nitroform, Acrolein, Methylene chloride, Magnesium sulfate
TCTNB	Trichlorotrinitrobenzene	1,3,5-Trichlorobenzene, Nitric acid, Sulfuric acid
Tetraniline	Tetranitro aniline	Sulfuric acid, Sodium nitrate, Metanitroaniline
Tetraniline	Tetranitro aniline	Sulfuric acid, Nitric acid, Metanitroaniline
Tetrazide	Isocyanogen tetraazide	Isocyanogen tetrabromide, Acetone, Sodium azide
Tetryl	Nitramine, *N*-Methyl-*N*,2,4,6-tetranitrobenzenamine	Nitric acid, Sulfuric acid, *N*,*N*-Dimethylaniline
Tetryl		Dimethylaniline, Sulfuric acid, Nitric acid
TEX	Dintrotetraoxadiazatetracyclododecane	Sulfuric acid, Nitric acid, THDFP, Urea, Sodium bicarbonate
Thermite		Iron oxide, Aluminum powder
Thermite		Magnesium powder, Ferric oxide, Aluminum powder
TNA	1,3,5,7-Tetranitroadamantane	Potassium permanganate, Adamantane, Bromine, Sodium sulfite, Hydrochloric acid, Glacial acetic acid, Aluminum foil, Toluene, Methylene iodide, Acetonitrile, Tetrahydrofuran, Sodium hydroxide, Acetone, Magnesium sulfate, Aluminum chloride, Chloroform
TNAD	1,3,4,8-Tetranitro-1,4,5,8-tetraazadecalin	Ethylenediamine, Glyoxal, Sodium nitrite, Hydrochloric acid, Nitric acid, Ethanol
TNB	4,4,4-Trinitro-1-butanol	4,4,4-Trinitrobutryaldehyde, Methanol, Sodium borohydride, Hydrochloric acid, Methylene chloride, Sodium bicarbonate, Magnesium sulfate
TNBCI	Trinitrobenzylchloride	TNT, Sodium hypochlorite, Tetrahydrofuran, Methanol, Hydrochloric acid

TND	1,4,6,9-Tetranitrodimantane	Aluminum foil, Iodine powder, Carbon disulfide, 1,4,6,9-Tetrabromodiamantane, Sodium bisulfite, Hydrochloric acid, Methanol, Acetonitrile, Acetone, Sodium hydroxide, Magnesium sulfate, Potassium permanganate, Toluene
TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether	Methylene chloride, 2-Bromomethanol, Trioxane, Aluminum chloride, Magnesium sulfate, Nitroform, Acetone, Sodium bicarbonate, Hexane, Silver nitrate, Acetonitrile
TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether	1,2-Dichloroethane, Hexamethyldisilane, Iodine, Cyclohexane, 1,3-Dioxolane, Nitroform, Methylene chloride, Dimethylformamide, Sodium sulfate, Hydrochloric acid, Magnesium sulfate, Nitric acid, Sulfuric acid
TNM	Tertranitromethamnie	Sulfuryl chloride, Acetic anhydride, Nitric acid, Sodium bicarbonate, Sodium sulfate
TNM	Tetranitromethamnie	Nitric acid, Sulfuric acid, Malonamide
TNM	Tetranitromethamnie	Nitric acid, Sulfuric acid, Cyanoacetic acid
TNP	Trinitropyridine	Sulfuric acid, Acetasalicyclic acid, Potassium nitrate
TNP	1,1,1,2-Teranitropropane	Nitroform, Diethyl ether, 1-Bromo-1-nitroethane, Sodium sulfuate
TNT	Trinitrotoluene	Toluene, Sulfuric acid, Nitric acid
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Nitric acid, Sulfuric acid, Toluene
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Toluene, Sulfuric acid, Nitric acid, Methylene chloride
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Toluene, Sulfuric acid, Potassium nitrate, Methylene chloride
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Toluene, Sulfuric acid, Sodium nitrate, Methylene chloride
TNT	2,4,6-Trinitrotoluene, Trinitrotoluene	Toluene, Sulfuric acid, Nitric acid, Premium unleaded gasoline
TNTC	2,4,6-Trinitro-2,4,6-triazacyclohexanone	Trifluoroacetic anhydride, Nitromethane, Ammonium nitrate, NIHT HCL, Ethyl acetate
TNTPB	1,3,5-Trinitro-2,4,6-tripicrybenzene	Copper powder, Hydrochloric acid, Methanol, Diethyl ether, Mesitylene, Trichlorotrinitrobenzene, Picrylchloride, Diatomaceous earth, Activated charcoal, Acetone

(*continued*)

Common Name	Synonyms	Ingredients
TPG	2,4,6-Trinitrophloroglucinol	Nitric acid, Sulfuric acid, Phloroglucinol, Hydrochloric acid
TTCC	Tetraminecopper chlorate	Sodium chlorate, Copper sulfate, Ammonium hydroxide, Alcohol
TTCC	Tetramminecopper chlorate	Sodium chlorate, Copper sulfate, Ammonium hydroxide, Alcohol
UDTNB	5-Ureido-1,3-diamino-2,4,6-trinitrobenzene	Sulfuric acid, Potassium nitrate, 1,3,5-Trifluorobenzene, Methylene chloride, Hexane, Charcoal, Sodium sulfate, 2-Amino-2-methylpropanone, Potassium hydrogen carbonate, 1,2-Dichloroethane, Trifluoroacetic acid, Urea, Dimethylformamide
Urea nitrate		Nitric acid, Urine
VS	Trivinylarsenic, Trisvinylarsine	Chloride gas, Magnesium metal turnings, Arsenic trichloride, Tetrahydrofuran, Pentane, Sodium sulfate
VX	TX-60, Methytlphosphonothioic acid S-[2-[bis(1-methylethyl)amino]ethyl] *o*-ethyl ester	Diethyl ether, Dichloromethylphosphine, Ethyl alcohol, *N*,*N*-Diethylamine, 2-Diisopropylaminoethanol, Rhombic sulfur
White smoke		Hexachloroethane, Zinc powder
White smoke		Potassium chlorate, Sulfur, Zinc powder, Sodium bicarbonate
White smoke		Zinc powder, Zinc oxide, Hexachoroethane
Yellow smoke		Potassium chlorate, Paranitraniline, Lactose, Powdered sugar
Yellow smoke		Potassium chlorate, Aniline, Napthalene azodimethyl
Yellow smoke		Potassium chlorate, Napthalene, Azodimethyl aniline, Auramine, Sodium bicarbonate, Sulfur

Synonyms

5

Synonyms	Common Name	Use
1,1,1,2-Teranitropropane	TNP	Secondary high explosive
1,1,1,6,6,6-Hexanitrohexyne-3	HNH-3	Secondary high explosive
1,1-Dichloro-2-propanone, 1,1-Dichloroacetone	DCA	Severe irritant
1,1′-Dintro-3,3′-azo-1,2,4-triazole	DNAT	Secondary high explosive
1,3,5,7-Tetranitroadamantane	TNA	Secondary high explosive
1,3,5-Triamino-2,4,6-trinitrobenzene	TATB	Secondary high explosive
1,3,5-Trifluoro-2,4,6-trinitrobenzene	F-TNB	Secondary high explosive
1,3,5-Trinitro-2,4,6-tripicrybenzene	TNTPB	Secondary high explosive
1,3-Diamino-2,4,6-trinitrobenzene	DATB	Secondary high explosive
1,3-Diazido-2-nitrazapropane	DANP	Secondary high explosive
1,4,5,8-Tetranitro-1,4,5,8-tetraazadecalin	TNAD	Secondary high explosive
1,4,6,9-Tetranitrodimantane	TND	Secondary high explosive
1,4-Dinitrofurazanopiperazine	DNFA-P	Secondary high explosive
1,5-Diazido-3-nitrazapentane	DIANP	Secondary high explosive
1,8-Bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]octane dimethobromide monohydrate	Chemical agent 4-686-293-02	Experimental chemical agent
1-10-Bis[(3-dimethylcarbamoxy-a-picolinyl)ethylamino]decane dimethobromide 1/2 hydrate	Chemical agent 4-686-293-01	Experimental chemical agent
1-Bromo-2-propanone	BC	Lachrymatory agent
1-Chloro-2-propanone	CA	Lachrymatory agent
1-Chloro-2,4,6-trinitrobenzene	Picryl chloride	Secondary high explosive
1-Methyl-3,5-dinitro-1,2,4-triazole	MNTA	Secondary high explosive
2,2,2-Trichlorotributylamine	HN4	Blister agent
2,2,2-Trichlorotriethylamine	HN3	Blister agent
2,2,2-Trinitroethyl-2-nitroxyethyl ether	TNEN	Secondary high explosive
2,2′,4,4′,6,6′-Hexanitrodiphenylmethane	Hexaditon	Secondary high explosive
2,3,4,5,6-Pentanitrotoluene	PNT	Secondary high explosive
2,4,6-Trinito-1,3-benzenediol	Styphnic acid	Secondary high explosive
2,4,6-Trinitro-2,4,6-triazacyclohexanone	TNTC	Secondary high explosive

2,4,6-Trinitro-3-methylphenol	Methylpicric acid	Secondary high explosive
2,4,6-Trinitro-lead-II-resorcinate	Lead styphnate	Primary high explosive
2,4,6-Trinitro-lead-phenolate	Lead picrate	Primary high explosive
2,4,6-Trinitrophenol	Picric acid	Secondary high explosive
2,4,6-Trinitrophloroglucinol	TPG	Secondary high explosive
2,4,6-Trinitrotoluene	TNT	Secondary high explosive, Main charge in many military munitions
2,2-Dichlorodiethyl sulfide	Sulfur mustard	Blister agent
2,2′,-Dichlorodiethylamine	HN1	Blister agent
2,2′-Dichlorodiethylmethylamine	HN2	Blister agent
2,4-Dinitro-2,4-diazapentane	DMMD	Secondary high explosive
2,4-Dinitrophenol	DNP	Secondary high explosive
2,4-Dinitrophenylurea	DNPU	Secondary high explosive
2-Amino-4,6-dinitrophenol	Picramic acid	Secondary high explosive
2-Chloro-1-phenylethanone	CN	Severe irritant
2-Chloroacetophenone	CN	Severe irritant
2-Chloroethenyl arsenous dichloride	Lewisite	Blister agent
2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine	HN4	Blister agent
2-Chloro-*N*,*N*-bis(2-chloroethyl)ethaneamine	HN3	Blister agent
2-Chlorovinyldichloroarsine	Lewisite	Blister agent
2-Methyl-2-(*N*-nitro-*N*-trinitroethylamino)-1,3-propyl dinitrate	NTND	Secondary high explosive
2-Nitroimino-5-nitro-hexahydro-1,3,5-triazine	NINHT	Secondary high explosive
3,5-Dinitro-1,2,4-triazole	NTA	Primary high explosive
3,5-Dinitro-1,2,4-triazole copper salt	CDNTA	Primary high explosive
3-Nitro-1,2,4-triazol-5-one	NTO	Secondary high explosive
3-Nitroperchlorylbenzene	Nitro-PCB	Secondary high explosive
4,4,4-Trinitro-1-butanol	TNB	Secondary high explosive
4,4,4-Trinitrobutyraldehyde	TBA	Secondary high explosive

(*continued*)

Synonyms	Common Name	Use
4,4-Dinitro-1-butanol	DNB	Secondary high explosive
4,6-Dinitro-2-diazophenol	Diazodinitrophenol	Primary high explosive
4,6-Dinitroresorcinol	DNR	Secondary high explosive
4-Azido-4,4-dinitro-1-butyl acetate	ADNB	Secondary high explosive
4-Azido-4,4-dinitro-1-butyl nitrate	ADBN	Secondary high explosive
4-Amino-*N*,2,3,5,6-pentanitrotoluene	A-NPNT	Secondary high explosive
5,5′-bi-1*H*-Tetrazole diammonium salt	TADA	Primary high explosive
5,7-Dintiro-5,7-diaza-1,3-dioxabicyclooctane-2-one	DDD	Secondary high explosive
5-Carboxy-1,3-diamino-2,4,6-trinitrobenzene	DATBA	Secondary high explosive
5-Nitro-2(3,5-diamino-2,4,6-trinitrophenol)-1,2,4-triazole	NDTT	Secondary high explosive
5-Nitroterazolecopper salt	CNTA	Primary high explosive
5-Ureido-1,3-diamino-2,4,6-trinitrobenzene	UDTNB	Secondary high explosive
7-Amino-4,6-dinitrobenzofuroxan	ADNBF	Secondary high explosive
10-Chloro-5,10-dihydrophenarsazine	DM	Vomiting agent
Acetyltrinitro-cyclotetramethylene tetramine	Solex	Secondary high explosive
Acquinite	Chloropicrin	Lachrymatory agent
Adamsite	DM	Vomiting agent
Agent 1-8	Chemical agent 4-686-293-02	Experimental chemical agent
Agent 1-10	Chemical agent 4-686-293-01	Experimental chemical agent
Ammonium 2-amino-4,6-dinitrophenolate	Ammonium picramate	Primary high explosive
Ammonium 2-amino-4,6-dinitropicrate	Ammonium picramate	Primary high explosive
Ammonium chlorate	AC	Secondary high explosive
Ammonium dinitramide	AND	Secondary high explosive
Ammonium perchlorate	APC	Secondary high explosive
ANS	ANS	“Underground” literature explosive
Arsenic hydride, Hydrogen arsenide	Arsine	Blood agent
B,*B*-Dicyano-*o*-chlorostyrene	CS	Severe irritant
Biguanide diperchlorate	BDC	Secondary high explosive
Binary explosive	BE	Secondary high explosive

Binary explosive	ANFO	Secondary high explosive
Bis(1,3-diazido-2-propyl)formal	BDPF	Secondary high explosive
Bis{a-[(3-dimethylcarbamoxy-a-picolinyl)pyrrolidinio]}-4,4′-biacetophenone dibromide monohydrate	Chemical agent 4-692-530-01	Experimental chemical agent
Bis{a-[(3-dimethylcarbamoxyphenyl)methylamino]}-4,4′-biacetophenone dibromide monohydrate	Chemical agent 4-692-530-02	Experimental chemical agent
Blausaure	AC	Blood agent, Extreme poison
a-Bromobenzeneacetonitrile	BBC	Lachrymatory agent, Severe irritant
a-Bromo-a-tolunitrile	BBC	Lachrymatory agent, Severe irritant
Bromide cyanide	BC	Violent irritant
Bromoacquinite	Bromopicrin	Lachrymatory agent
Bromobenzylcyanide	BBC	Lachrymatory agent, Severe irritant
C4	Cyclonite	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Calcium hypochlorite	HTH	Produces high-temperature thermal effects
Camite	BBC	Lachrymatory agent, Severe irritant
Carbonyl chloride	Phosgene	Choking agent
Carbonic dichloride	Phosgene	Choking agent
Carbon oxychloride	Phosgene	Choking agent
Cast explosive	CE	Secondary high explosive
Cellulosetrinitrate	Nitrocellulose	Low explosive, Main component in smokeless powders, IED filler
Chloride cyanide	CK	Blood agent, Extreme poison
Chloroacetone	CA	Lachrymatory agent
Chloroacetophenone	CN	Severe irritant
Chloroformyl chloride	Phosgene	Choking agent
ChloroSoman	GDCl	Nerve agent
ChloroTrilon	GDCl	Nerve agent

(*continued*)

Synonyms	Common Name	Use
Chlorovinylarsine dichloride	Lewisite	Blister agent
ClCB	Chlorosarin	Nerve agent
CMPF	GF	Nerve agent
Cyanogen	CA	Blood agent, Extreme poison
Cyanogen bromide	BC	Violent irritant
Cyanogen chloride	CK	Blood agent, Extreme poison
Cyclonite	RDX	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Cyclosarin	GF	Nerve agent
Cyclotrimethyethylenetrinitramine	RDX	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Diazodinitrophenol	DDNP	Primary high explosive
Dicyan	CA	Blood agent, Extreme poison
Dicyanide	CA	Blood agent, Extreme poison
Diethylamidoethoxyphosphoryl cyanide	GAA	Nerve agent
Diimine, *N*,*N*′-bis-Isopropylethylenediimine	DIM	Severe irritant
Diisopropylamine trinatrate	DITN	Secondary high explosive
Dimethylamidoethoxyphosphoryl cyanide	GA	Nerve agent
Dimethylamidoethoxythiophosphorus cyanide	GAA	Nerve agent
Dimethylamidoethoxyphosphoryl fluoride-hydrochloride	FTH	Nerve agent
Dimethylphosphoramidocyanidate	GA	Nerve agent
Dintrotetraoxadiazatetracyclododecane	TEX	Secondary high explosive
Dintroxydiethylamine nitrate	DNAN	Secondary high explosive
Dintroxydiethylnitramine	DINA	Secondary high explosive
Dichlorofirmoxime	CX	Blister agent
Diphenylaminechloroarsine	DM	Vomiting agent
Diphenylchloroarsine	DA	Lachrymatory agent

Di-Silver aminotetrazole perchlorate	SATP	Primary high explosive
Distilled arsine, Phenylarsine, Diphenylarsine	AS-20	Blister agent
Ethanedinitrile	CA	Blood agent, Extreme poison
Erythritol tetranitrate	ETN	Secondary high explosive
Ethyldichloroarsine	ED	Blister agent
Ethyldichloroarsine	ED	Blister agent
Ethylene glycol dinitrate	EGDN	Replaced nitroglycerin as "main" component in dynamites
Ethylenediamine dinitrate	EDDN	Secondary high explosive
Explosive D	Ammonium picrate	Secondary high explosive, Main charge-castable explosive
Flash incendiary	FI	"Underground" literature explosive
Flashlight powder	Flash powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Fluorotabun hydrochloride	FTH	Nerve agent
Fly mines	Nitrogen tri-iodide	Primary high explosive, Extremely pressure/impact sensitive
Gun cotton	Nitrocellulose	Low explosive, Main component in smokeless powders, IED filler
Gunpowder	Black powder	Low explosive, IED filler, Black powder weapon propellant
Hexametheylenetriperoxide diamine	HMTD	Secondary high explosive, Originally developed as a military propellant, Used by terrorists as main charge
Hexanitrobibenzyl	HBN	Secondary high explosive
Hexanitrobibenzyl	Hexol	Secondary high explosive
Hexanitrobiphenyl	HNBP	Secondary high explosive
Hexanitro-hexaazaisowurtzane	HNIW	Secondary high explosive

(*continued*)

Synonyms	Common Name	Use
Hexanitrostilbene	HNS	Secondary high explosive
Hexanitrotetrachloroazobenzene	HNTCAB	Secondary high explosive
Home-made napalm	Fire gel	"Underground" literature incendiary
Hornet gas	CX	Blister agent
Hydrazine nitroform	HNF	Secondary high explosive
Hydrazinium nitroformate	HNF	Secondary high explosive
Hydrogen cyanide	AC	Blood agent, Extreme poison
Hydrocyanic acid	AC	Blood agent, Extreme poison
Improvised explosive mixture	IEM	"Underground" literature explosive
Improvised explosive mixture	Nitro starch	Secondary high explosive, Blasting agent, Main charge
Improvised explosive mixture	Picric acid	Secondary high explosive, Main charge-castable explosive
Inositol hexanitrate	Inositol nitrate	Secondary high explosive
Isocyanogen tetraazide	Tetrazide	Primary high explosive
Isopropoxy-2-propylphosphoryl fluoride	GBI	Nerve agent
Isopropoxymethylphosphoryl chloride	Chlorosarin	Nerve agent
Isopropylethylphosphoryl fluoride	GBE	Nerve agent
Isopropylethylphosphonofluoridate	GBE	Nerve agent
Isopropylethylthiophosphorusfluoridate	GS	Nerve agent
Isopropylethylthiophosphorus fluoride	GS	Nerve agent
Isopropyl-2-propylphosphonofluoridate	GBI	Nerve agent
Isopropylmethylphosphonofluoridate	GB	Nerve agent
Isopropylmethylphosphoryl fluoride	GB	Nerve agent
Isopropyl-2-propylphosphonofluoridate	GBI	Nerve agent
Isopropyl-2-propylphosphonofluoridate	GBI	Nerve agent
Kampfstoff	Sulfur mustard	Blister agent
Lampblack	Carbon black	Fuel
Lead nitrotetrazole	LNTA	Primary high explosive

Lead picrate	DNP	Primary high explosive
Liquid explosive	LEXP	"Underground" literature explosive
Mace	CN	Severe irritant
Mercury nitrotetrazole	HGNTA	Primary high explosive
Methenamine	Hexamine	Used to make C4 like compounds
Methylchlorophosphorusfluoridic acid 1,3-tri-methylpropyl ester	GDCl	Nerve agent
Methylenedinitrotetraazacyclooctane	DPT	Secondary high explosive
Methylnitramine	MNA	Secondary high explosive
Methylphosphonofluoridic acid 1,2,2-tri-methylpropyl ester	GD	Nerve agent
Methytlphosphonothioic acid *S*-[2-[bis(1-methylethyl)amino]ethyl] *O*-ethyl ester	VX	Nerve agent
Methylthiophosphorusfluoridic acid 1,3-tri-methylpropyl ester	GDS	Nerve agent
Monomethyl cyclohexanepentanitrate	Quebrachitol nitrate	Secondary high explosive
Mustard gas II, 2,2′-Dichlorodipropryl sulfide, Bis(beta-chloropropryl) sulfide	Sulfur mustard II	Blister agent
Mustard gas	Sulfur mustard	Blister agent
NC	Nitrocellulose	Low explosive, Main component in smokeless powders, IED filler
N,*N*′-di-2-Ethanolethylenediamine tetranitrate	EDT	Secondary high explosive
N-2-Nitroxyethyl nitramine	NENA	Secondary high explosive
Neopentylene phosphoryl fluoridate, Neopentylene fluorophosphate	NPF	Nerve agent
Neopentylene thiophosphorus fluoridate, Neopentylene fluorophosponothioate	NPSF	Nerve agent
N-Ethyl-2,2′ di(chloroethyl) amine	HN1	Blister agent
N,*N*-bis(2-Chloroethyl)ethanamine	HN1	Blister agent
NG	Nitroglycerin	Secondary high explosive, Main charge in many military munitions

(*continued*)

Synonyms	Common Name	Use
N-Diethylphosphoramidocyanidate	GAA	Nerve agent
N-Diethylthiophosphoroamidocyanidate	GAA	Nerve agent
N-Dimethylphosphoramidofluoridate-hydrochloride	FTH	Nerve agent
Nettle gas	CX	Blister agent
N-Methyl-*N*,2,4,6-tetranitrobenzenamine	Tetryl	Secondary high explosive, Military explosive main charge
Nitramine	Tetryl	Secondary high explosive, Military explosive main charge
Nitrated cellulose	Nitrocellulose	Low explosive, Main component in smokeless powders, IED filler
Nitrated cornstarch	Nitro starch	Secondary high explosive
Nitrobromoform	Bromopicrin	Lachrymatory agent
Nitrochloroform	Chloropicrin	Lachrymatory agent
Nitrogen tri-iodide	Ammonium tri-iodide	Primary high explosive, Impact sensitive material
Nitroglycerin	NG	Secondary high explosive, Used in some forms of dynamite
Nitroglycol	EGDN	Replaced Nitroglycerin as "main" component in dynamites
Nitrourea	NU	Secondary high explosive, Used in first World Trade Center terrorist incident
N-Methyl gluconamide pentanitrate	MGP	Secondary high explosive
N-Methyl-2,2′ di(chloroethyl)amine	HN2	Blister agent
N,*N*-bis(2-Chloroethyl)methamine	HN2	Blister agent
N-Nitro-*N*-methylhydroxy acetamidenitrate	NMHAN	Secondary high explosive
o-Chlorobenzalmalononitrile	CS	Severe irritant
o-Chlorobenzylidenemalononitrile	CS	Severe irritant
Octagen	HMX	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
o-Cyclohexylmethylfluorophosphonate	GF	Nerve agent

o-Ethyl *S*-[2-(dimethylamino)methyl]methylphosphonothioate	IIVX	Nerve agent
o-Ethyl 2-ethylthioethyl methylphosphonothioate	Sub-VX	Nerve agent
o-Isopropyl methyphosphonofluoridothioate	GS	Nerve agent
Oxalic acid dinitrile	CA	Blood agent, Extreme poison
Tetranitro-tetraazacyclooctane	HMX	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
Pentaerithrytol tetratnitrate	PETN	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives
Pentaerithrytol trinitrate	PEN	Secondary high explosive
Perchorylbenzene	PCB	Secondary high explosive
Phenarsazine chloride	DM	Vomiting agent
Phenyldichloroarsine	PD	Blister agent
Phosgene oxime	CX	Blister agent
Picfume	Chloropicrin	Lachrymatory agent
Picfume bromide	Bromopicrin	Lachrymatory agent
Pinacolyl methylchlorophosphorusfluoridate	GDCl	Nerve agent
Pinacolyl methylphosphonofluoridate	GD	Nerve agent
Pinacolyl methylthiophosphorusfluoridate	GDS	Nerve agent
Poor man's C4	IEM	"Underground" literature explosive
Potassium chlorate	PC	Low explosive, IED filler, Black powder weapon propellant
Potassium dinitramide	KND	Secondary high explosive
Potassium nitroform	KNF	Secondary high explosive
Pressure-sensitive explosive	PSE	Impact-sensitive material
Prussic acid	AC	Blood agent, Extreme poison
PVC	Polyvinylchloride	Binder, Color enhancer
Pyrotechnic powder	Flash powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

(*continued*)

Synonyms	Common Name	Use
RDX	Cyclonite	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Sarin	GB	Nerve agent
Sarin-ethyl	GBE	Nerve agent
Sarin-II	GBE	Nerve agent
Sarin-isopropyl	GBI	Nerve agent
Sarin-III	GBI	Nerve agent
Self-igniting incendiary	SEI	Produces high-temperature thermal effects
Silver nitroform	SNF	Primary high explosive
Smokeless powder	Nitrocellulose	Low explosive, Main component in smokeless powders, IED filler
Sodium 2-amino-4,6-dinitrophenolate	Sodium picramate	Primary high explosive
Sodium 2-amino-4,6-dinitropicrate	Sodium picramate	Primary high explosive
Soman	GD	Nerve agent
Sorbitol hexanitrate	Hexanitrate	Secondary high explosive
Sub-VX,*S*-(2-dimethylaminomethyl)-*o*-ethyl methylphosphonothiolate	IIVX	Nerve agent
Sulfur sarin	GS	Nerve agent
Tabun	GA	Nerve agent
Tabun-II	GAA	Nerve agent
Tertranitromethamine	TNM	Secondary high explosive
Tetranitro-tetraazacyclooctane	HMX	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
Tetraminecopper chlorate	TTCC	Improvised military propellant
Tetranitro aniline	Tetraniline	Primary high explosive
Thiosarin	GS	Nerve agent
Thiosoman	GDS	Nerve agent
Thiotabun	GAA	Nerve agent

ThioTrilon	GDS	Nerve agent
Trilon	GD	Nerve agent
Trilon 46	GB	Nerve agent
Tri-acetone tri-peroxide	TATP	Terrorist explosive used extensively in the Middle East
Triazoethanol nitrate	TAEN	Primary high explosive
Tribromonitromethane	Bromopicrin	Lachrymatory agent
Trichlorotrinitrobenzene	TCTNB	Secondary high explosive
Trichloronitromethane	Chloropicrin	Lachrymatory agent
Trinitroanisole	TA	Secondary high explosive
Trinitrobenzylchloride	TNBCI	Secondary high explosive
Trinitromethane	Nitroform	Secondary high explosive
Trinitrophloroglucinol lead salt	Lead-TNP	Primary high explosive
Trinitropyridine	TNP	
Trinitrotoluene	TNT	Secondary high explosive, Main charge in many military munitions
Tris(2-azidoethyl)amine	Azidoethyl	Secondary high explosive
Tris(beta-chlorobutyl)amine	HN4	Blister agent
Tris(beta-chloroethyl)amine	HN3	Blister agent
Trivinylarsenic	VS	Violent irritant
Tris(vinyl)arsine	VS	Violent irritant
TX-60	VX	Nerve agent
Vaseline	Petroleum jelly	Fuel, Stabilizer
Yperite	Sulfur mustard	Blister agent

Explosives

6

Common Name	Ingredients	Use
AC	Ammonia, Carbon dioxide, Sodium chlorate	Secondary high explosive
AC	Ammonia gas, Carbon dioxide, Sodium chlorate	Secondary high explosive
ADBN	Hydrochloric acid, Methanol, ADNB, Methylene chloride, Nitric acid, Sodium bicarbonate, Magnesium sulfate	Secondary high explosive
ADNB	4,4-DNB, Methylene chloride, Magnesium sulfate, Sodium azide, Sodium hydroxide, Acetyl chloride, Ethyl acetate, Hexane	Secondary high explosive
ADNBF	Tetraniline, Glacial acetic acid, Sodium azide	Secondary high explosive
Amatol	Ammonium nitrate, TNT	Secondary high explosive, Mixture of TNT and Ammonium nitrate, Military explosive
Ammonium azide	Sodium azide, Ammonia	Primary high explosive
Ammonium nitrate	Nitric acid, Ammonia, Methanol	Secondary high explosive
Ammonium nitrate		Oxidizer
Ammonium nitrate	Sodium nitrate, Ammonia gas, Methanol, Carbon dioxide	Secondary high explosive
Ammonium nitrate	Nitric acid, Ammonia gas, Methanol	Secondary high explosive
Ammonium nitrate	Ammonia, Nitric acid	Low explosive, Primary ingredient in many types of commercial blasting materials (i.e., ANFO, dynamite, etc.)
Ammonium picramate	Picric acid, Ammonia, Ammonium bisulfide, Carbon disulfide	Primary high explosive
Ammonium picrate	Ammonia, Picric acid, Water	Secondary high explosive, Main charge-castable explosive
Ammonium picrate	Picric acid, Ammonia, benzene	Primary high explosive
Ammonium tri-iodide	Ammonia, Iodine crystals	Primary high explosive, Impact-sensitive material
Ammonpulver	Ammonium nitrate, Charcoal powder	Early form of black powder
AND	Potassium dinitramide, Ammonium sulfate, Isopropyl alcohol, Petroleum ether	Secondary high explosive

AND	Nitric acid, Urea, Sulfuric acid, Nitronium tetrafluoroborate, Anhydrous ammonia, Acetonitrile, Ethyl acetate, Chloroform	Secondary high explosive
AND	Acetonitrile, Ammonium carbonate, Isopropyl alcohol, Nitronium tetrafluoroborate, Anhydrous ammonia, Diethyl ether, Acetone, Butanol, Ethyl acetate	Secondary high explosive
ANFO	Ammonium nitrate, Diesel fuel	Secondary high explosive
A-NPNT	TNT, Dioxane, Hydrogen sulfide gas, Ammonia, Hydrochloric acid, Potassium iodide, Sulfuric acid, Paraformaldehyde, Methylene chloride, Nitric acid, Magnesium sulfate, Chloroform, Methanol	Secondary high explosive
ANS	Ammonium nitrate, Sulfur	"Underground" literature explosive
APC	Ammonia gas, Carbon dioxide, Sodium perchlorate	Secondary high explosive
APC	Ammonia, Carbon dioxide, Sodium perchlorate	Secondary high explosive
Astrolite	Ammonium nitrate, Aluminum powder, Hydrazine	Secondary high explosive, Binary high explosive, Mixture of hydrazine, aluminum, and ammonium nitrate
Azidoethyl	Dimethylformamide, Sodium azide, Chloroform, Sodium sulfate, 2,2,2-Trichloroethylamine	Secondary high explosive
Barium styphnate	Styphnic acid, Ammonia, Barium chlorate dehydrate, Acetone	Primary high explosive
BDC	Biguanide, Ethanol, Perchloric acid, Ethyl acetate	Secondary high explosive
BDPF	1,3-Dichloro-2-propanol, Trioxane, 1,2-Dichloroethane, Sulfuric acid, Sodium bicarbonate, Dimethylsulfoxide, Sodium azide, Methylene chloride, Magnesium sulfate	Secondary high explosive
BE	Ammonium nitrate, Nitromethane	Secondary high explosive
BE	Ammonium nitrate, Hydrazine	Secondary high explosive
Black powder	Sodium nitrate, Sulfur, Charcoal	Low explosive, IED filler, Black powder weapon propellant

(*continued*)

Common Name	Ingredients	Use
Black powder	Potassium nitrate, Sulfur, Charcoal	Low explosive, IED filler
CDNTA	Anhydrous hydrazine, Cyanogen bromide, Isopropyl alcohol, Sodium nitrite, Sodium bicarbonate, Copper nitrate trihydrate	Primary high explosive
CE	Sodium nitrate, Potassium chlorate, Sugar, Charcoal powder	Secondary high explosive
CE	Sodium nitrate, Sodium chlorate, Sugar, Charcoal powder	Secondary high explosive
CE	Potassium nitrate, Potassium chlorate, Sugar, Charcoal powder	Secondary high explosive
CE	Potassium nitrate, Sodium chlorate, Sugar, Charcoal powder	Secondary high explosive
CNTA	Cupric sulfate, 5-Aminotetrazole, Sulfuric acid, Sodium nitrite	Primary high explosive
Comp C-1	RDX, Mineral oil, Lecithin	Secondary high explosive, Plastic explosive
Copper azide	Sodium azide, Copper-II-sulfate pentahydrate	Primary high explosive
Copper fulminate	Copper nitrate, Nitric acid, Ethanol	Primary high explosive
Cyclonite	Hexamine, Nitric acid	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
Cyclonite	Methenamine, Nitric acid	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
DANP	Acetic anhydride, Nitric acid, Hexamine, Acetic acid, Methylene chloride, Sodium bicarbonate, Magnesium sulfate, Dioxane, Hydrogen chloride, Acetone, Sodium azide	Secondary high explosive
DATB	*m*-Phenylenediamine, Methanol, Sodium carbonate, Ethyl chlorormate, Ethylene glycol dimethyl ether, Sulfuric acid, Nitric acid	Secondary high explosive

DATBA	2-Amino-2-methylpropane, Methylene chloride, 1,3,5-Trifluoro-2,4,6-trinitrobenzene, Potassium hydrogen carbonate, Trifluoroacetic acid, Cyanotrimethylsilane, Nitromethane, Acetonitrile, Sulfuric acid	Secondary high explosive
DDD	Triethylamine, Acetonitrile, Methylenedinitramine, 4,5-Dichloro-1,3-dioxolan-2-one, Silica gel, Benzene, Ethanol	Secondary high explosive
DDNP	Picric acid, Sulfur, Potassium nitrate, Sulfuric acid, Sodium hydroxide	Primary high explosive
DDNP	Picric acid, Sulfur, Sodium nitrate, Sulfuric acid, Sodium hydroxide	Primary high explosive
DIANP	DMSO, Sodium azide, DINA, Methylene chloride, Sodium sulfate, Activated alumina	Secondary high explosive
Diazodinitrophenol	Methyl green, Sodium picramate, Hydrochloric acid, Sodium nitrate	Primary high explosive
Diazodinitrophenol	Nitric acid, Kerosene, Ammonium picramate, Ethanol	Primary high explosive
Diazodinitrophenol	Sodium picramate, Hydrochloric acid, Sodium nitrate	Primary high explosive
DINA	Nitric acid, Diethanolamine, Acetic anhydride, Acetyl chloride, Acetone, Potassium carbonate	Secondary high explosive
DINA	Acetic anhydride, Hydrochloric acid, Diethanolamine, Methylene chloride, Nitric acid, Sodium bicarbonate	Secondary high explosive
DINA	Nitric acid, Diethanolamine, Hydrogen chloride, Sodium bicarbonate	Secondary high explosive
DITN	Diisopropylamine, Nitric acid	Secondary high explosive
DMMD	Formaldehyde, Methylnitramine, Methylene chloride, Magnesium sulfate, Sulfuric acid, Chloroform, Hexane	Secondary high explosive
DNAN	Nitric acid, Diethanolamine, Ethanol, Ether, Acetone	Secondary high explosive

(*continued*)

Common Name	Ingredients	Use
DNAT	Potassium permanganate, 3-Amino-1,2,4,triazole, Sodium hydroxide, Sodium bisulfite, Hydrochloric acid, Nitric acid, Acetic anhydride, Acetone	Secondary high explosive
DNB	TNB, Methanol, Potassium iodide, Hydrochloric acid, Sodium bisulfite, Methylene chloride, Magnesium sulfate	Secondary high explosive
DNFA-P	Hydroxylamine hydrochloride, Glyoxal, Sodium carbonate, Ethanol, Chlorine, Chloroform, Methanol, Ethylenediamine, Ethylene glycol, Sodium hydroxide, Trifluoroacetic anhydride, Nitric acid, Acetone	Secondary high explosive
DNP	Phenol, Sodium nitrite, Sodium hydroxide, Nitric acid	Secondary high explosive
DNP	Lead oxide, Picric acid, Alcohol	Primary high explosive
DNPU	Phenylurea, Methylene chloride, Sulfuric acid, Nitric acid, Sodium bicarbonate	Secondary high explosive
DNR	Nitric acid, Sulfuric acid, Resorcinol diacetate, Urea	Secondary high explosive
DPT	Nitrourea, Formaldehyde, Sodium hydroxide, Ammonia	Secondary high explosive
Dynamite	Nitroglycerin, Potassium nitrate, Ammonium oxalate, Nitrocellulose, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Sodium nitrate, Potassium chloride, Wood meal, Chalk	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Barium nitrate, Sodium carbonate, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Potassium nitrate, Anhydrous sodium sulfate, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Potassium nitrate, Ammonium oxalate, Wood meal	Secondary high explosive, Used in commercial blasting operations

Dynamite	Nitroglycerin, Potassium nitrate, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Potassium nitrate, Barium nitrate, Wood meal, Starch	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Sodium nitrate, Ammonium oxalate, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Potassium nitrate, Nitrocellulose, Wood meal, Vaseline, Charcoal powder	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Potassium perchlorate, Ammonium oxalate, Nitrocellulose, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Sodium nitrate, Sodium carbonate, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Ammonium oxalate, Nitrocellulose, Wood meal, Sodium nitrate	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Potassium nitrate, Nitrocellulose, Ammonium oxalate, Wood meal	Secondary high explosive, Used in commercial blasting operations
Dynamite	Nitroglycerin, Sodium nitrate, Nitrocellulose, Wood meal, Potassium nitrate	Secondary high explosive, Used in commercial blasting operations
EDDN	Ethylenediamine, Nitric acid, Ethanol	Secondary high explosive
EDT	Nitric acid, Ethanol, *N*,*N*′-Diethanolethylenediamine	Secondary high explosive
Emulsion explosive	Ammonium nitrate, Water, Oil, Oleic acid, Sodium hydroxide	Secondary high explosive, Used in commercial blasting operations, "Gelled" explosive
ETN	Sulfuric acid, Erythritol, Nitric acid, Sodium carbonate, Ethanol	Secondary high explosive
FI	Zinc dust, Sulfur	"Underground" literature explosive
Flash comp	Potassium chlorate, Sulfur, Sugar	Low explosive, "Underground" literature explosive
Flash comp	Potassium perchlorate, Sodium salicylate	Low explosive, "Underground" literature explosive
Flash comp	Potassium perchlorate, Antimony trisulfide, Lampblack, Aluminum powder, Barium carbonate	Low explosive, "Underground" literature explosive

(*continued*)

Common Name	Ingredients	Use
Flash comp	Potassium perchlorate, Barium nitrate, Aluminum powder	Low explosive, "Underground" literature explosive
Flash comp	Potassium chlorate, Sulfur, Antimony sulfide, Potassium nitrate	Low explosive, "Underground" literature explosive
Flash comp	Potassium chlorate, Sulfur, Charcoal powder	Low explosive, "Underground" literature explosive
Flash comp	Potassium chlorate, Sulfur, Antimony powder	Low explosive, "Underground" literature explosive
Flash powder	Sodium perchlorate, Aluminum powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Barium peroxide, Aluminum powder, Magnesium powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium perchlorate, Barium nitrate, Aluminum powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium chlorate, Gallic acid, Red gum	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium chlorate, Red phosphorus, Sulfur, Calcium carbonate	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium perchlorate, Aluminum powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium perchlorate, Aluminum powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Sodium perchlorate, Magnesium powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium permanganate, Aluminum powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium perchlorate, Magnesium powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks.
Flash powder	Potassium chlorate, Charcoal powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks

Flash powder	Potassium perchlorate, Barium nitrate, Aluminum powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium perchlorate, Magnesium powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium chlorate, Antimony sulfide, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Sodium chlorate, Charcoal powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Sodium perchlorate, Aluminum powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Sodium perchlorate, Magnesium powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
F-TNB	Sulfuric acid, Potassium nitrate, 1,3,5-Trifluorobenzene, Methylene chloride, Hexane, Charcoal, Sodium sulfate	Secondary high explosive
Gelatin explosive	Nitro-glycol, Nitrocellulose, Potassium nitrate, Flour	Secondary high explosive, "Underground" literature explosive
HBN	Benzene, Methanol, TNT, Sodium hydroxide, Sodium hypochlorite	Secondary high explosive
HE mix	Barium chlorate, Paraffin wax	High explosive, "Underground" literature explosive
HE mix	Sodium peroxide, Sulfur	High explosive, "Underground" literature explosive
HE mix	Ammonium nitrate, Gasoline	High explosive, "Underground" literature explosive
HE mix	Sodium chlorite, Aluminum powder	High explosive, "Underground" literature explosive
HE mix	Potassium permanganate, Powdered sugar	High explosive, "Underground" literature explosive
HE mix	Guanidine nitrate, Antimony powder	High explosive, "Underground" literature explosive
HE mix	Potassium bichromate, Antimony sulfide	High explosive, "Underground" literature explosive
HE mix	Sodium nitrate, Sulfur	High explosive, "Underground" literature explosive
HE mix	Potassium perchlorate, Cane sugar	High explosive, "Underground" literature explosive
HE mix	Magnesium chlorate, Aluminum powder	High explosive, "Underground" literature explosive

(*continued*)

Common Name	Ingredients	Use
Hexaditon	TNT, Tetradrofuran, Potassium hydroxide, Picryl chloride, Dimethylsulfoxide, Hydrochloric acid, Acetonitrile, Methanol	Secondary high explosive
Hexamethylenetretramine dinitrate	Hexamethlenetetramine, Nitric acid, Acetone	High explosive, "Underground" literature explosive
Hexanitrate	Nitric acid, Sulfuric acid, Sorbitol, Ethanol, Sodium carbonate	Secondary high explosive
Hexol	TNT, Benzene, Methanol, Sodium hypochlorite, Sodium hydroxide	Secondary high explosive
HGNTA	Sodium hydroxide, CNTA, Mercury II nitrate, Nitric acid	Primary high explosive
HMTD	Hexamethylenetetramine, Citric acid, Hydrogen peroxide	Secondary high explosive, Originally developed as a military propellant, Used by terrorists as main charge
HMX	Nitric acid, Phosphorus pentoxide, Solex	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HMX	Nitric acid, Ammonium nitrate, Paraformaldehyde, Hexamine, Acetone, Acetic acid, Acetic anhydride	Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube" (i.e., Nonel)
HNBP	Picryl chloride, Ethylene dichloride, Copper powder, Acetone	Secondary high explosive
HNF	Nitroform, Methanol, Hydrazine	Secondary high explosive
HNF	Nitroform, Diethyl ether, Hydrazine	Secondary high explosive
HNH-3	Nitroform, Methyl acetate, Silver-I oxide, 1,4-Dibromobutyne-2, Chloroform	Secondary high explosive
HNIW	Glyoxal, Benzylamine, Formic acid, Acetonitrile, Acetic anhydride, Palladium on charcoal, Bromobenzene, Chloroform, Sulfolane, Nitrosonium tetrafluoroborate, Ethyl acetate	Secondary high explosive
HNS	TNT, DMSO, Oxygen gas, Sodium benzoate, Hydrochloric acid, Methanol, Acetone	Secondary high explosive

HNS	Trinitrobenzyl chloride, Triethylbenzyl ammonium chloride, Methylene chloride, Sodium hydroxide, Methanol	Secondary high explosive
HNTCAB	Nitric acid, Sulfuric acid, 3,5-Dichloraniline	Secondary high explosive
Hydrogen gas	Hydrochloric acid, Aluminum metal	Fuel/air explosive component
Hydrogen gas	Sodium hydroxide, Aluminum metal	Fuel/air explosive component
IEM	Potassium permanganate, Sulfur	"Underground" literature explosive
IEM	Potassium nitrate, Iron powder	"Underground" literature explosive
IEM	Potassium permanganate, Sugar	"Underground" literature explosive
IEM	Potassium chlorate, Sugar	"Underground" literature explosive
IEM	Potassium permanganate, Sulfur, Aluminum powder	"Underground" literature explosive
IEM	Potassium permanganate, Sulfur, Magnesium powder	"Underground" literature explosive
IEM	Potassium nitrate, Magnesium powder	"Underground" literature explosive
IEM	Sodium nitrate, Magnesium powder, Sulfur	"Underground" literature explosive
IEM	Potassium chlorate, Magnesium powder	"Underground" literature explosive
IEM	Potassium chlorate, Diesel fuel, Paraffin	Low explosive, "Underground" literature explosive
IEM	Potassium chlorate, Sulfur, Magnesium powder	"Underground" literature explosive
IEM	Potassium chlorate, Sugar	"Underground" literature explosive
IEM	Potassium chlorate, Sulfur, Aluminum powder	"Underground" literature explosive
IEM	Sugar, Potassium nitrate, Ferric oxide	"Underground" literature explosive
IEM	Potassium chlorate, Petroleum jelly	"Underground" literature explosive
IEM	Ammonium perchlorate, Aluminum powder, Iron oxide	"Underground" literature explosive
IEM	Sodium chlorate, Paraffin	Low explosive, "Underground" literature explosive
IEM	Potassium chlorate, Aluminum powder	"Underground" literature explosive
IEM	Potassium permanganate, Sugar, Aluminum powder	"Underground" literature explosive
IEM	Potassium chlorate, Fuel oil	Secondary high explosive
IEM	Potassium chlorate, Sulfur	"Underground" literature explosive
IEM	Potassium chlorate, Sulfur, Charcoal	"Underground" literature explosive

(*continued*)

Common Name	Ingredients	Use
IEM	Sodium chlorate, Fuel oil	Secondary high explosive
IEM	Barium peroxide, Magnesium powder	"Underground" literature explosive
IEM	Potassium permanganate, Sugar, Magnesium powder	"Underground" literature explosive
IEM	Potassium chlorate, Charcoal powder, Sulfur	"Underground" literature explosive
IEM	Sodium carbonate, Sulfur	"Underground" literature explosive
IEM	Aluminum, Sulfur, Starch	"Underground" literature explosive
IEM	Sugar, Sodium peroxide	"Underground" literature explosive
IEM	Sulfuric acid, Nitric acid, Methanol (Methyl alcohol)	"Underground" literature explosive
Inositol nitrate	Quebrachitol, Hydrochloric acid, Ethanol, Diethyl ether, Nitric acid, Sulfuric acid, Sodium bicarbonate, Sodium sulfate	Secondary high explosive
Iron		Fuel
KND	Nitronium tetrafluoroborate, Acetonitrile, Ammonium carbonate, Potassium carbonate, Diethyl ether, Acetone, Ethyl acetate, Butanol	Secondary high explosive
KND	Sulfamic acid, Potassium hydroxide, Ethanol, Nitric acid, Sulfuric acid, Acetone, Isopropyl alcohol	Secondary high explosive
KNF	Dioxane, Potassium nitrite, Potassium bicarbonate, Tetranitromethane	Secondary high explosive
Lead azide	Lead acetate, Sodium azide	Primary high explosive
Lead azide	Sodium azide, Lead acetate, Water	Primary high explosive, Extremely pressure/impact sensitive, Used in ammunition primer and blasting caps
Lead picrate	Picric acid, Sodium hydroxide, Lead nitrate	Primary high explosive
Lead styphnate	Styphnic acid, Sodium hydroxide, Lead-II-nitrate	Primary high explosive
Lead styphnate	Styphnic acid, Magnesium carbonate, Lead nitrate, Nitric acid	Primary high explosive
Lead-TNP	Phloroglucinol, Glacial acetic acid, Sodium nitrite, Lead nitrate	Primary high explosive
LEXP	Nitric acid, Nitrobenzene	"Underground" literature explosive

LEXP	Aluminum powder, Carbon tetrachloride	Improvised explosive
LEXP	Aluminum powder, Tetrachlorethylene	Improvised explosive
LNTA	CNTA, Hydrogen sulfide, Benzene, Lead II hydroxide	Primary high explosive
Mercury azide	Mercury-II-nitrate, Sodium azide	Primary high explosive
Mercury fulminate	Mercury, Nitric acid, Alcohol	Primary high explosive
Mercury fulminate	Mercury, Nitric acid, Ethanol	Primary high explosive
Mercury nitride	Ammonia, Mercury oxide, Nitric acid	Primary high explosive
Methylene dinitramine	Nitric acid, Methylene diformamide, Acetic anhydride, Formic acid, Benzene	Secondary high explosive
Methylpicric acid	*m*-Cresol, Sodium nitrite, Sodium hydroxide, Nitric acid	Secondary high explosive
MGP	Nitric acid, *N*-Methyl gluconamide, Acetic anhydride, Sodium bicarbonate, Methanol	Secondary high explosive
MNA	Dimethylurea, Nitric acid, Sulfuric acid, Methylene chloride, Sodium carbonate	Secondary high explosive
MNTA	Anhydrous hydrazine, Cyanogen bromide, Isopropyl alcohol, Sodium nitrite, Sodium bicarbonate, Copper nitrate trihydrate, Nitric acid, Diethyl ether, Dimethyl sulfate	Secondary high explosive
NDTT	Potassium nitrate, Sulfuric acid, 1,3,5-Trifluorobenzene, Methylene chloride, Hexane, Tert-butylamine, Trifluoroacetic acid, 1,2-Dichloroethane, 3-Amino-1,2,4-traizole, Glacial acetic acid, Sodium nitrite, Urea, Ethyl acetate, Dimethylformamide, Diethyl ether, Sodium sulfate, Methanol	Secondary high explosive
NENA	Ethanolamine, Diethyl ether, Ethyl chlorocarbonate, Sodium hydroxide, Magnesium sulfate, Nitric acid, Anhydrous ammonia	Secondary high explosive

(*continued*)

Common Name	Ingredients	Use
NG	Nitric acid, Sulfuric acid, Glycerin, Sodium bicarbonate	Secondary high explosive, Used in some forms of dynamite
NINHT	Hydrochloric acid, Nitroguanidine, Hexamine, Methanol, Sodium nitrite, Nitric acid	Secondary high explosive
Nitro starch	Nitric acid, Sulfuric acid, Cornstarch, Ammonia	Secondary high explosive
Nitro starch	Starch, Sulfuric acid, Nitric acid	Secondary high explosive, Blasting agent, Main charge
Nitrocellulose	Cellulose, Sulfuric acid, Nitric acid, Water	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Wood cellulose, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Cotton, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Phosphorus pentoxide, Methylene chloride, Nitric acid, Cotton balls, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Wood pulp, Sodium hydroxide, Sodium bicarbonate, Carbon disulfide	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Cellophane, Cotton, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Newspaper, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitroform	Nitric acid, Isopropyl alcohol, Methylene chloride, Calcium chloride	Secondary high explosive
Nitroform	Methanol, Potassium nitrate, Potassium carbonate, Tetranitromethane, Hydrogen chloride, Methylene chloride, Diethyl ether	Secondary high explosive
Nitroform	Methanol, Sodium nitrate, Sodium bicarbonate, Tetranitromethane, Hydrochloric acid, Methylene chloride, Calcium sulfate	Secondary high explosive
Nitrogen tri-iodide	Ammonium nitrate, Chlorine gas	Primary high explosive, Extremely pressure/impact sensitive

Nitrogen tri-iodide	Anhydrous ammonia, Chlorine gas, Water	Primary high explosive, Extremely pressure/impact sensitive
Nitroglycerin	Glycerin, Sulfuric acid, Nitric acid	Secondary high explosive, Main charge in many military munitions
Nitroguanidine	Guanidine, Sulfuric acid, Nitric acid	Secondary high explosive, Found in triple-base smokeless powders
Nitro-PCB	Nitric acid, Sulfuric acid, Perchlorylbenzene, Benzene, Petroleum ether	Secondary high explosive
NMHAN	Nitric acid, Sulfuric acid, *N*-Methylhydroxy acetamide	Secondary high explosive
NQ	Nitric acid, Sulfuric acid, Glycerol, Magnesium sulfate	Secondary high explosive
NTA	Anhydrous hydrazine, Cyanogen bromide, Isopropyl alcohol, Sodium nitrite, Sodium bicarbonate, Copper nitrate trihydrate, Nitric acid, Diethyl ether	Primary high explosive
N′-Tetranitrate	Ethylenediamine, Ethylene oxide, Phosphorus pentoxide, Nitric acid, Ammonia, Diethyl ether	Secondary high explosive
NTND	2-Methyl-2-amino-1,3-propanediol, Nitroform, Formaldehyde, Ethanol, Magnesium sulfate, Acetic anhydride, Nitric acid, Sodium bicarbonate	Secondary high explosive
NTO	Semicarbazide hydrochloride, Formic acid, Nitric acid	Secondary high explosive
NU	Sulfuric acid, Urea, Nitric acid	Secondary high explosive, Used in first World Trade Center terrorist incident
PCB	Ammonium chloride, Benzene, Perchloryl fluoride	Secondary high explosive
PEN	Pentaerithrytol, Nitric acid, Sulfuric acid, Methylene chloride, Urea, Sodium bicarbonate	Secondary high explosive
PEN	Pentaerithrytol, Nitric acid, Sulfuric acid, Methylene chloride, Urea, Sodium bicarbonate, Diethyl ether	Secondary high explosive
PETN	Pentaerithrytol, Nitric acid, Acetone, Sulfuric acid, Sodium carbonate	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives
PETN	Pentaerythrite, Nitric acid	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives

(*continued*)

Common Name	Ingredients	Use
PETN	Pentaerithrytol, Nitric acid, Acetone, Ethanol	Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives
Picramic acid	Glacial acetic acid, Ammonium picramic acid	Secondary high explosive
Picric acid	Aspirin, Sulfuric acid, Potassium nitrate, Alcohol	Secondary high explosive, Main charge-castable explosive
Picric acid	Phenol, Sodium hydroxide, Sodium nitrite, Nitric acid	Secondary high explosive
Picric acid	Phenol, Sulfuric acid, Nitric acid, Water	Secondary high explosive, Main charge-castable explosive
Picryl chloride	Chlorobenzene, Potassium nitrate, Sulfuric acid, Acetone, Methanol	Secondary high explosive
Plastic explosive	Potassium chlorate, Petroleum jelly, Aluminum powder	Secondary high explosive, "Underground" literature explosive
Plastic explosive	RDX, Paraffin, Bearing grease	Secondary high explosive, "Underground" literature explosive
Plastic explosive	RDX, Nitroglycerin, Petroleum jelly	Secondary high explosive, "Underground" literature explosive
PNT	TNT, Glacial acetic acid, Iron powder, Sulfuric acid, Nitric acid, Anisole, Methylene chloride, Magnesium sulfate, Chloroform	Secondary high explosive
Potassium chlorate	Potassium chloride, Bleach	Oxidizer
Potassium chlorate		Oxidizer
Potassium chlorate	Potassium chloride, Calcium hypochlorite	Low explosive, IED filler, Black powder weapon propellant
Potassium nitrate		Oxidizer
Potassium perchlorate		Oxidizer
PSE	Red phosphorus, Potassium chlorate, Alcohol	Impact-sensitive material
Quebrachitol nitrate	Quebrachitol, Nitric acid, Sulfuric acid, Sodium bicarbonate	Secondary high explosive
RDX	Hexamine, Nitric acid, Sodium nitrate	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	Propionitrile, Sulfuric acid, Trioxane, Nitric acid	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive

RDX	1,3,5-Tripropionylhexahydro-*s*-triazine, Nitric acid	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
RDX	DAPT, Acetic acid, Ammonium nitrate, Nitric acid, Acetic anhydride	Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive
SATP	Silver perchlorate, 5-Aminotetrazole, Perchloric acid	Primary high explosive
SEI	Potassium permanganate, Glycerin	"Underground" literature explosive
Silver azide	Silver nitrate, Sodium azide	Primary high explosive
Silver fulminate	Silver nitrate, Nitric acid, Ethanol	Primary high explosive
Silver NENA	Silver nitrate, NENA, Ethanol, Diethyl ether	Secondary high explosive
Silver nitride	Ammonia, Silver oxide	Primary high explosive
SNF	Nitroform, Ethyl ether, Silver-I-oxide	Primary high explosive
Sodium chlorate		Oxidizer
Sodium nitrate		Oxidizer
Sodium perchlorate		Oxidizer
Sodium picramate	Picric acid, Sodium hydroxide, Ammonium bisulfide, Carbon disulfide	Primary high explosive
Solex	TAT, Nitric acid, Phosphorus pentoxide	Secondary high explosive
Styphnic acid	Resorcinol, Nitric acid, Sodium nitrite	Secondary high explosive
Styphnic acid	Resorcinol, Nitric acid, Sodium nitrite, Sulfuric acid	Secondary high explosive
Sulfur nitride	Benzene, Sulfur chloride, Ammonia	Primary high explosive
Sulfur nitride	Toluene, Sulfur chloride, Ammonia	Primary high explosive
Sulfur nitride	Toluene, Sulfur, Ammonia, Chlorine	Primary high explosive
TA	Picryl chloride, Methanol, Potassium hydroxide	Secondary high explosive
TADA	Hydrogen cyanide, Sodium azide, Copper-II-sulfate pentahydrate, Hydrogen peroxide, Formic acid, Ammonium chloride	Primary high explosive
TAEN	Nitric acid, Sulfuric acid, Sodium bicarbonate	Primary high explosive
TATB	1,3,5-Trichloro-2,4,6-trinitrobenzene, Dioxane, Ammonia gas	Secondary high explosive

(*continued*)

Common Name	Ingredients	Use
TATB	3,5-Dichloroanisole, Nitric acid, Sulfuric acid, Ammonia gas, Toluene, Acetone	Secondary high explosive
TATB	1,3,5-Trichloro-2,4,6-trinitrobenzene, Benzene, Ammonia gas	Secondary high explosive
TATB	1,3,5-Trichloro-2,4,6-trinitrobenzene, Xylene, Ammonia gas, Hexane	Secondary high explosive
TATP	Acetone, Hydrogen peroxide, Sulfuric acid	Terrorist explosive used extensively in the Middle East
TATP	Acetone, Hydrogen peroxide, Hydrochloric acid	Terrorist explosive used extensively in the Middle East
TBA	Nitroform, Acrolein, Methylene chloride, Magnesium sulfate	Secondary high explosive
TCTNB	1,3,5-Trichlorobenzene, Nitric acid, Sulfuric acid	Secondary high explosive
Tetraniline	Sulfuric acid, Sodium nitrate, Meta-nitroaniline	Primary high explosive
Tetraniline	Sulfuric acid, Nitric acid, Meta-nitroaniline	Primary high explosive
Tetrazide	Isocyanogen tetrabromide, Acetone, Sodium azide	Primary high explosive
Tetryl	Nitric acid, Sulfuric acid, *N*,*N*-Dimethylaniline	Secondary high explosive, Military explosive main charge
Tetryl	Dimethylaniline, Sulfuric acid, Nitric acid	Secondary high explosive, Main charge in many military munitions
TEX	Sulfuric acid, Nitric acid, THDFP, Urea, Sodium bicarbonate	Secondary high explosive
TNA	Potassium permanganate, Adamantane, Bromine, Sodium sulfite, Hydrochloric acid, Glacial acetic acid, Aluminum foil, Toluene, Methylene iodide, Acetonitrile, Tetrahydrofuran, Sodium hydroxide, Acetone, Magnesium sulfate, Aluminum chloride, Chloroform	Secondary high explosive
TNAD	Ethylenediamine, Glyoxal, Sodium nitrite, Hydrochloric acid, Nitric acid, Ethanol	Secondary high explosive
TNB	4,4,4-Trinitrobutryaldehyde, Methanol, Sodium borohydride, Hydrochloric acid, Methylene chloride, Sodium bicarbonate, Magnesium sulfate	Secondary high explosive

TNBCI	TNT, Sodium hypochlorite, Tetrahydrofuran, Methanol, Hydrochloric acid	Secondary high explosive
TND	Aluminum foil, Iodine powder, Carbon disulfide, 1,4,6,9-Tetrabromodiamantane, Sodium bisulfite, Hydrochloric acid, Methanol, Acetonitrile, Acetone, Sodium hydroxide, Magnesium sulfate, Potassium permanganate, Toluene	Secondary high explosive
TNEN	Methylene chloride, 2-Bromoethanol, Trioxane, Aluminum chloride, Magnesium sulfate, Nitroform, Acetone, Sodium bicarbonate, Hexane, Silver nitrate, Acetonitrile	Secondary high explosive
TNEN	1,2-Dichloroethane, Hexamethyldisilane, Iodine, Cyclohexane, 1,3-Dioxolane, Nitroform, Methylene chloride, Dimethylformamide, Sodium sulfate, Hydrochloric acid, Magnesium sulfate, Nitric acid, Sulfuric acid	Secondary high explosive
TNM	Nitric acid, Sulfuric acid, Cyanoacetic acid	Secondary high explosive
TNM	Sulfuryl chloride, Acetic anhydride, Nitric acid, Sodium bicarbonate, Sodium sulfate	Secondary high explosive
TNM	Nitric acid, Sulfuric acid, Malonamide	Secondary high explosive
TNP	Nitroform, Diethyl ether, 1-Bromo-1-nitroethane, Sodium sulfate	Secondary high explosive
TNP	Sulfuric acid, Acetasalicylic acid, Potassium nitrate	
TNT	Toluene, Sulfuric acid, Nitric acid	Secondary high explosive, Main charge in many military munitions
TNT	Toluene, Sulfuric acid, Sodium nitrate, Methylene chloride	Secondary high explosive, Main charge in many military munitions
TNT	Toluene, Sulfuric acid, Nitric acid, Methylene chloride	Secondary high explosive, Main charge in many military munitions

(*continued*)

Common Name	Ingredients	Use
TNT	Toluene, Sulfuric acid, Nitric acid, Premium unleaded gasoline	Secondary high explosive, Main charge in many military munitions
TNT	Nitric acid, Sulfuric acid, Toluene	Secondary high explosive, Main charge in many military munitions
TNT	Toluene, Sulfuric acid, Potassium nitrate, Methylene chloride	Secondary high explosive, Main charge in many military munitions
TNTC	Trifluoroacetic anhydride, Nitromethane, Ammonium nitrate, NIHT HCL, Ethyl acetate	Secondary high explosive
TNTPB	Copper powder, Hydrochloric acid, Diethyl ether, Mesitylene, Trichlorotrinitrobenzene, Picrylchloride, Diatomaceous earth, Activated charcoal, Acetone	Secondary high explosive
TPG	Nitric acid, Sulfuric acid, Phloroglucinol, Hydrochloric acid	Secondary high explosive
TTCC	Sodium chlorate, Copper sulfate, Ammonium hydroxide, Alcohol	Improvised military propellant
TTCC	Sodium chlorate, Copper sulfate, Ammonium hydroxide, Alcohol	Improvised propellant
UDTNB	Sulfuric acid, Potassium nitrate, 1,3,5-Trifluorobenzene, Methylene chloride, Hexane, Charcoal, Sodium sulfate, 2-Amino-2-methylpropanone, Potassium hydrogen carbonate, 1,2-Dichloroethane, Trifluoroacetic acid, Urea, Dimethylformamide	Secondary high explosive
Urea nitrate	Nitric acid, Urine	Secondary high explosive, Used in first World Trade Center terrorist incident
Zinc		Fuel, Smoke ingredient

Chemical Weapons

7

Common Name	Ingredients	Use
Arsine	Arsenic, Zinc, Hydrochloric acid	Blood agent
AS-20	Benzene, Arsenic trichloride, Isopentane, Aluminum chloride, Sodium bicarbonate, Sodium sulfate	Blister agent
BBC	Benzyl chloride, Sodium cyanide, Ethyl alcohol, Liquid bromine, Carbon tetrachloride, Sodium hydroxide, Sodium sulfate, Chloroform	Lachrymatory agent, Severe irritant
BC	Sulfuric acid, Bromine, Sodium cyanide	Violent irritant
BC	Sodium hydroxide, Sodium cyanide, Bromine, Sulfuric acid	Violent irritant
BC	Acetone, Sulfuric acid, Bromine, Methylene chloride	Lachrymatory agent
Bromopicrin	Liquid bromine, Chlorine, Nitromethane, Carbon tetrachloride, Potassium hydroxide	Lachrymatory agent
CA	Acetone, Sulfuric acid, Chlorine gas, Methylene chloride, Calcium chloride	Lachrymatory agent
CA	Acetone, Sulfuric acid, Chlorine gas, Chloroform, Calcium chloride	Lachrymatory agent
CA	Dimethoxy ethane, Nitrate trihydrate, Liquid hydrogen cyanide	Blood agent, Extreme poison
Chemical agent 4-686-293-01	3-Pyridol, Ethylmethylamine, Formaldehyde, Pyridine, Dimethylcarbamoyl chloride, Sodium carbonate, Chloroform, Sodium sulfate, 1,10-Dibromodecane, Acetone, Acetonitrile, Charcoal, Ethyl acetate	Experimental chemical agent
Chemical agent 4-686-293-02	3-Pyridol, Ethylmethylamine, Formaldehyde, Pyridine, Dimethylcarbamoyl chloride, Sodium carbonate, Chloroform, Sodium sulfate, 1,8-Dibromodecane, Acetone, Acetonitrile, Charcoal, Ethyl acetate	Experimental chemical agent
Chemical agent 4-692-530-01	3-Pyridol, Pyrolidine, Formaldehyde, Pyridine, Dimethylcarbamoyl chloride, Sodium carbonate, Chloroform, Sodium sulfate, Tetrahydrofuran, *a*,*a*′-Dibromo-4,4′-biacetophenone, Ethanol, Charcoal, Ethyl ether	Experimental chemical agent
Chemical agent 4-692-530-02	Ethyl alcohol, 3-Dimethylcarbomoxydimethylanaline, *a*,*a*′-Dibromo-4,4′-biacetophenone, Ethyl alcohol, Charcoal, Ethyl acetate	Experimental chemical agent
Chlorine gas	Bleach, Ammonia	Poison gas used in WW I
Chloropicrin	Sodium hydroxide, Nitromethane, Chlorine gas, Calcium chloride	Lachrymatory agent
Chlorosarin	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Isopropyl alcohol, Toluene, Pyridine, Calcium chloride	Nerve agent
CK	Sodium cyanide, Carbon tetrachloride, Ethyl alcohol, Chlorine gas	Blood agent, Extreme poison

CK	Sodium cyanide, Glacial acetic acid, Chlorine gas, Carbon tetrachloride	Blood agent, Extreme poison
CN	Benzene, Aluminum chloride, 2-Chloroacetyl chloride, Hydrochloric acid, Sodium hydroxide, Methylene chloride, Calcium chloride, Hexanes	Severe irritant
CS	Methanol, Malononitrile, *o*-Chlorobenzaldehyde, Piperdine	Severe irritant
CX	Tetrahydrofuran, Hydrogen chloride, Chloropicrin, Powdered tin	Blister agent
DA	Benzene, Arsenic trichloride, Aluminum chloride, Hexanes	Lachrymatory agent
DCA	Acetone, Sulfuric acid, Chlorine, Calcium chloride	Severe irritant
DIM	Isopropylamine, Glyoxal, Diethyl ether	Severe irritant
DM	Benzene, Pyridine, Diphenylamine, Arsenic trichloride	Vomiting agent
ED	Tetraethyl lead, Arsenic trichloride	Blister agent
ED	Ethyl chloride, Magnesium metal turnings, Tetrahydrofuran, Arsenic trichloride, Hexanes	Blister agent
FTH	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium fluoride, Ethyl alcohol, Chloroform, Petroleum ether	Nerve agent
GA	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile, Pyridine	Nerve agent
GA	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile	Nerve agent
GAA	Phosphorus oxytrichloride, Ethylene dichloride, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile	Nerve agent
GAA	Thiophosphorus trichloride, Trichloroethylene, Dimethylamine, Sodium carbonate, Sodium cyanide, Ethyl alcohol, Acetonitrile	Nerve agent
GB	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Isopropyl alcohol, Silica gel, Isopropyl ether, Toluene	Nerve agent
GB	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Isopropyl alcohol, Silica gel, Isopropyl ether	Nerve agent

(*continued*)

Common Name	Ingredients	Use
GBE	Phosphorous trichloride, Aluminum chloride, Ethyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Isopropyl alcohol, Silica gel, Isopropyl ether, Toluene	Nerve agent
GBE	Phosphorous trichloride, Aluminum chloride, Ethyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Isopropyl alcohol, Silica gel, Isopropyl ether	Nerve agent
GBI	Phosphorus trichloride, Aluminum chloride, Isopropyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Isopropyl alcohol, Silica gel, Isopropyl ether, Toluene	Nerve agent
GBI	Phosphorus trichloride, Aluminum chloride, Isopropyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Isopropyl alcohol, Silica gel, Isopropyl ether	Nerve agent
GD	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Sodium fluoride, Pinoacolyl alcohol, Silica gel, Isopropyl ether, Toluene	Nerve agent
GD	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Pinoacolyl alcohol, Silica gel, Isopropyl ether	Nerve agent
GD	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Hydrofluoric acid, Pinoacolyl alcohol, Silica gel, Isopropyl ether, Toluene	Nerve agent
GDCl	Phosphorous trichloride, Aluminum chloride, Methyl chloride, Methylene chloride, Hydrochloric acid, Pinoacolyl alcohol, Toluene, Pyridine, Calcium chloride	Nerve agent
GDS	Phosphorous trichloride, Methyl disulfide, Methyl iodide, Toluene, Pinoacolyl alcohol, Sodium fluoride	Nerve agent
GF	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Hydrochloric acid, Hydrofluoric acid, Cyclohexanol, Silica gel, Isopropyl ether	Nerve agent
GF	Phosphorus trichloride, Aluminum chloride, Methyl chloride, Hydrochloric acid, Sodium fluoride, Cyclohexanol, Silica gel, Isopropyl ether, Toluene	Nerve agent
GS	Phosphorous trichloride, Methyl disulfide, Methyl iodide, Toluene, Sodium fluoride, Isopropyl alcohol	Nerve agent
HC	Sodium cyanide, Potassium cyanide, Sulfuric acid	Blood agent, Extreme poison

HC	Potassium ferro cyanide, Sodium ferro cyanide, Sulfuric acid	Blood agent, Extreme poison
HN1	Diethanolethylamine, Hydrochloric acid, Chloroform, Acetone, Sulfur, Chlorine gas, Sodium carbonate	Blister agent
HN1	Diethanolethylamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate	Blister agent
HN2	Diethanolmethylamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate	Blister agent
HN2	Diethanolmethylamine, Hydrochloric acid, Chloroform, Sulfur, Chlorine gas, Sodium carbonate	Blister agent
HN3	Triethanolamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate	Blister agent
HN3	Triethanolamine, Hydrochloric acid, Chloroform, Acetone, Sulfur, Chlorine gas, Sodium carbonate	Blister agent
HN4	Tributanolamine, Thionyl chloride, Chloroform, Acetone, Sodium carbonate	Blister agent
HN4	Tributanolamine, Hydrochloric acid, Chloroform, Acetone, Sulfur, Chlorine gas, Sodium carbonate	Blister agent
IIVX	Diethyl ether, Dichloromethylphosphine, Ethyl alcohol, *N*,*N*-Diethylamine, 2-Dimethylaminomethanol, Rhombic sulfur	Nerve agent
Lewisite	Acetylene, Arsenic trichloride, Aluminum chloride	Blister agent
Lewisite	Acetylene, Arsenic trichloride, Mercuric chloride, Hydrochloric acid	Blister agent
MD	Methylene chloride, Magnesium metal turnings, Tetrahydrofuran, Arsenic trichloride, Hexanes	Blister agent
NPF	Phosphorus oxytrichloride, Benzene, Neopentyl glycol, Pyridine, Petroleum ether, Ammonium fluoride	Nerve agent
NPSF	Thiophosphorus trichloride, Benzene, Neopentyl glycol, Pyridine, Petroleum ether, Ammonium fluoride	Nerve agent
PD	Benzene, Arsenic trichloride, Aluminum chloride	Blister agent
Phosgene	Sulfur trioxide, Carbon tetrachloride	Choking agent
Phosgene	Chlorine gas, Carbon monoxide	Choking agent
Phosgene	Sulfuric acid, Carbon tetrachloride	Choking agent
Phosgene	Chlorine gas, Activated charcoal, Carbon monoxide	Choking agent

(*continued*)

Common Name	Ingredients	Use
Sub-VX	Diethyl ether, Dichloromethylphosphine, Ethyl alcohol, *N*,*N*-Diethylamine, 2-Ethylthioethanol, Rhombic sulfur	Nerve agent
Sulfur mustard	Ethylene chlorohydrin, Sodium sulfide monohydrate, Hydrochloric acid	Blister agent
Sulfur mustard	Ethylene gas, Sulfur dichloride, Methylene chloride, Activated charcoal	Blister agent
Sulfur mustard	Ethylene gas, Sulfur, Methylene chloride, Activated charcoal, Chlorine gas	Blister agent
Sulfur mustard II	Propylene chlorohydrin, Sodium sulfide monohydrate, Hydrochloric acid	Blister agent
VS	Chloride gas, Magnesium metal turnings, Arsenic trichloride, Tetrahydrofuran, Pentane, Sodium sulfate	Violent irritant
VX	Diethyl ether, Dichloromethylphosphine, Ethyl alcohol, *N*,*N*-Diethylamine, 2-Diisopropylaminoethanol, Rhombic sulfur	Nerve agent

Incendiaries

8

Common Name	Ingredients	Use
AC	Ammonia, Carbon dioxide, Sodium chlorate	Secondary high explosive
AC	Ammonia gas, Carbon dioxide, Sodium chlorate	Secondary high explosive
Anthracene		Smoke ingredient
APC	Ammonia, Carbon dioxide, Sodium perchlorate	Secondary high explosive
APC	Ammonia gas, Carbon dioxide, Sodium perchlorate	Secondary high explosive
FI	Zinc dust, Sulfur	"Underground" literature explosive
Fire bricks	Aluminum powder, Plaster of Paris	"Underground" literature incendiary
Fire gel	Styrofoam, Gasoline	"Underground" literature incendiary
Flash powder	Potassium chlorate, Antimony sulfide, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Sodium chlorate, Charcoal powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium permanganate, Aluminum powder, Sulfur	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium chlorate, Red phosphorus, Sulfur, Calcium carbonate	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium perchlorate, Barium nitrate, Aluminum powder	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Flash powder	Potassium chlorate, Gallic acid, Red gum	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
HTH	Hypochlorites (calcium/sodium), Glycerin	Produces high-temperature thermal effects
Hydrogen gas	Hydrochloric acid, Aluminum metal/foil	Fuel/air explosive component
Hydrogen gas	Sodium hydroxide, Aluminum metal/foil	Fuel/air explosive component
IEM	Potassium permanganate, Sulfur	"Underground" literature explosive
IEM	Barium peroxide, Magnesium powder	"Underground" literature explosive
IEM	Ammonium perchlorate, Aluminum powder, Iron oxide	"Underground" literature explosive
IEM	Potassium nitrate, Magnesium powder	"Underground" literature explosive
IEM	Potassium permanganate, Sugar	"Underground" literature explosive
IEM	Aluminum, Sulfur, Starch	"Underground" literature explosive

IEM	Sugar, Sodium peroxide	"Underground" literature explosive
IEM	Potassium chlorate, Sugar	"Underground" literature explosive
IEM	Potassium permanganate, Sugar	Secondary high explosive, "Underground" literature explosive
IEM	Potassium nitrate, Iron powder	"Underground" literature explosive
Iron		Fuel
Linseed oil		Stabilizer
Magnesium		Fuel
Molotov cocktail	Gasoline, Sulfuric acid, Potassium chlorate, Sugar	"Underground" literature incendiary
Petroleum jelly		Fuel, Stabilizer
Phosphorus		Fuel
Potassium chlorate		Oxidizer
Potassium chlorate	Potassium chloride, Bleach (Calcium hypochlorite)	Low explosive, IED filler, Black powder weapon propellant
Potassium nitrate		Oxidizer
SEI	Potassium permanganate, Glycerin	"Underground" literature explosive
SEI	Glycerin, Potassium permanganate	Produces high-temperature thermal effects
Sodium chlorate		Oxidizer
Sulfur		Fuel
Thermite	Iron oxide, Aluminum powder	Produces high temperature and can melt metal
Thermite	Magnesium powder, Ferric oxide, Aluminum powder	High-temperature incendiary
Zinc		Fuel, Smoke ingredient

9 Propellants

Common Name	Ingredients	Use
Nitrocellulose	Nitric acid, Sulfuric acid, Wood cellulose, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Newspaper, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Cotton, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Cellophane, Cotton, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Nitric acid, Sulfuric acid, Wood pulp, Sodium hydroxide, Sodium bicarbonate, Carbon disulfide	Low explosive, Main component in smokeless powders, IED filler
Nitrocellulose	Phosphorus pentoxide, Methylene chloride, Nitric acid, Cotton balls, Sodium bicarbonate	Low explosive, Main component in smokeless powders, IED filler
Rocket fuel	Ammonium nitrate, Aluminum powder, Polyester resin, Ammonium bicarbonate, Charcoal powder	Secondary high explosive
Rocket fuel	Ammonium perchlorate, Aluminum powder, Ground PVC intetrahydrofuran	Improvised projectile propellant
Rocket fuel	Ammonium nitrate, Ammonium perchlorate, Polyester resin, Charcoal powder	Improvised projectile propellant
Rocket fuel	Potassium perchlorate, Ammonium perchlorate, Epoxy resin, Aluminum powder	Improvised projectile propellant

Explosive Precursors 10

Common Name	Ingredients	Use
AC	Ammonia gas, Carbon dioxide, Sodium chlorate	Secondary high explosive
AC	Ammonia, Carbon dioxide, Sodium chlorate	Secondary high explosive
Aluminum		Fuel
Ammonium nitrate	Ammonia, Nitric acid	Low explosive, Primary ingredient in many types of commercial blasting materials (i.e., ANFO, dynamite, etc.)
Ammonium nitrate		Oxidizer
Ammonium nitrate	Nitric acid, Ammonia, Methanol	Secondary high explosive
Ammonium nitrate	Sodium nitrate, Ammonia gas, Methanol, Carbon dioxide	Secondary high explosive
Ammonium nitrate	Nitric acid, Ammonia gas, Methanol	Secondary high explosive
Ammonium perchlorate		Oxidizer
APC	Ammonia gas, Carbon dioxide, Sodium perchlorate	Secondary high explosive
APC	Ammonia, Carbon dioxide, Sodium perchlorate	Secondary high explosive
Hexamine	Ammonia, Formaldehyde	Used to make C4-like compounds
Nitric acid	Potassium nitrate, Sulfuric acid, Water	Key component for many explosive manufacturing processes
Nitric acid	Sodium nitrate, Sulfuric acid, Water	Key component for many explosive manufacturing processes
Nitroguanidine	Guanidine, Sulfuric acid, Water	Secondary high explosive, Found in triple-base smokeless powders
Potassium chlorate	Potassium chloride, Bleach (Calcium hypochlorite)	Low explosive, IED filler, Black powder weapon propellant, Oxidizer
TNB	4,4,4-Trinitrobutyraldehyde, Methanol, Sodium borohydride, Hydrochloric acid, Methylene chloride, Sodium bicarbonate, Magnesium sulfate	Secondary high explosive
TNM	Nitric acid, Sulfuric acid, Malonamide	Secondary high explosive
TNM	Nitric acid, Sulfuric acid, Cynaoacetic acid	Secondary high explosive
TNM	Sulfuryl chloride, Acetic anhydride, Nitric acid, Sodium bicarbonate, Sodium sulfate	Secondary high explosive

Pyrotechnic Ingredients

11

Common Name	Ingredients	Use
Anthracene		Smoke ingredient
Antimony		Fuel
Antimony trisulfide		Fuel
Barium carbonate		Coloring agent
Barium chlorate		Oxidizer coloring agent
Barium nitrate		Oxidizer coloring agent
Barium oxalate		Coloring agent
Boric acid		Stabilizers
Calcium carbonate		Stabilizers
Calcium oxalate		Coloring agent
Carbon black		Fuel
Charcoal		Fuel
Clay		Insulator
Copper		Coloring agent
Copper acetanarsenate		Coloring agent
Copper carbonate		Coloring agent
Copper chloride		Coloring agent
Copper oxide		Coloring agent
Cryolite		Coloring agent
Dextrin		Binder
Gallic acid		Binder
Gum arabic		Binder
Hexachlorobenzene		Color enhancer
Hexachloromethane		Smoke ingredient
Iron		Fuel
Linseed oil		Stabilizer
Lithium carbonate		Coloring agent
Magnesium		Fuel
Parlon		Binder, Color enhancer

Phosphorus		Fuel
Polyvinylchloride		Binder, Color enhancer
Potassium benzoate		Fuel
Potassium chlorate		Oxidizer
Potassium nitrate		Oxidizer
Potassium perchlorate		Oxidizer
Potassium picrate		Whistle ingredient
Saran		Binder, Color enhancer
Shellac		Binder
Sodium chlorate		Oxidizer
Sodium nitrate		Oxidizer
Sodium perchlorate		Oxidizer
Strontium carbonate		Coloring agent, Fire retardant
Strontium nitrate		Coloring agent, Oxidizer
Strontium oxalate		Coloring agent, Fire retardant, Stabilizer
Sulfur		Fuel
Titanium		Fuel
Petroleum jelly		Fuel, Stabilizer
Zinc		Fuel, Smoke ingredient
Black smoke	Magnesium powder, Hexachlorethane, Naphthalene	Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks
Black smoke	Hexachloroethane, Alpha napthol, Anthracene, Aluminum powder, Smokeless powder, Naphthalene	Black smoke produced, Screening/signaling smoke
Black smoke	Black powder, Potassium nitrate, Coal tar, Charcoal powder, Paraffin	Black smoke produced, Screening/signaling smoke
Green smoke	Black powder, Potassium nitrate, Red arsenic, Sulfur, Antimony	Green smoke produced, Screening/signaling smoke
Red smoke	Potassium chlorate, Diethylaminorosidone, Powdered sugar	Red smoke produced, Screening/signaling smoke

(*continued*)

Common Name	Ingredients	Use
Red smoke	Potassium chlorate, Methylaminoanthraquinone, Sodium bicarbonate, Sulfur	Red smoke produced, Screening/signaling smoke
Red smoke	Potassium perchlorate, Antimony sulfide, Rhodamine red, Dextrin	Red smoke produced, Screening/signaling smoke
White smoke	Potassium chlorate, Sulfur, Zinc powder, Sodium bicarbonate	White smoke produced, Screening/signaling smoke
White smoke	Zinc powder, Zinc oxide, Hexachloroethane	White smoke produced, Screening/signaling smoke
White smoke	Zinc powder, Hexachloroethane	White smoke produced, Screening/signaling smoke
Yellow smoke	Potassium chlorate, Paranitraniline, Lactose, Powdered sugar	Yellow smoke produced, Screening/signaling smoke
Yellow smoke	Potassium chlorate, Aniline, Naphthalene azodimethyl	Yellow smoke produced, Screening/signaling smoke
Yellow smoke	Potassium chlorate, Naphthalene, Azodimethly aniline, Auramine, Sodium bicarbonate, Sulfur	Yellow smoke produced, Screening/signaling smoke

12 Uses

Use	Common Name	Synonyms
"Underground" literature explosive	IEM	Improvised explosive mixture
"Underground" literature explosive	SEI	Self-igniting incendiary
"Underground" literature explosive	LEXP	Liquid explosive
"Underground" literature explosive	FI	Flash incendiary
"Underground" literature explosive	ANS	ANS
"Underground" literature explosive	IEM	Poor man's C4
"Underground" literature incendiary	Fire bricks	
"Underground" literature incendiary	Molotov cocktail	
"Underground" literature incendiary	Fire gel	Homemade napalm
Binder	Gum arabic	
Binder	Dextrin	
Binder	Shellac	
Binder	Gallic acid	
Binder, Color enhancer	Parlon	
Binder, Color enhancer	Saran	
Binder, Color enhancer	Polyvinylchloride	PVC
Black smoke produced, Screening/signaling smoke	Black smoke	
Blister agent	Sulfur mustard	Mustard gas
Blister agent	Sulfur mustard	Kampfstoff
Blister agent	Sulfur mustard	Yperite
Blister agent	Sulfur mustard	2,2′-Dichlorodiethyl sulfide
Blister agent	HN2	*N*-Methyl-2,2′ di(chloroethyl)amine
Blister agent	HN2	*N*,*N*-bis(2-Chloroethyl)methamine
Blister agent	HN2	2,2′-Dichlorodiethylmethylamine
Blister agent	CX	Phosgene oxime
Blister agent	CX	Dichlorofirmoxime
Blister agent	CX	Hornet gas
Blister agent	CX	Nettle gas

Blister agent	HN4	Tris(beta-chlorobutyl)amine
Blister agent	HN4	2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine
Blister agent	HN4	2,2′,2″-Trichlorotributylamine
Blister agent	Sulfur mustard II	Mustard gas II, 2,2′-Dichlorodipropylsulfide
Blister agent	Sulfur mustard II	Bis(beta-chloropropyl) sulfide
Blister agent	HN4	Tris(beta-chlorobutyl)amine
Blister agent	HN4	2-Chloro-*N*,*N*-bis(2-chlorobutyl)butaneamine
Blister agent	HN4	2,2′,2″-Trichlorotributylamine
Blister agent	HN3	Tris(beta-chloroethyl)amine
Blister agent	HN3	2-Chloro-*N*,*N*-bis(2-chloroethyl)ethaneamine
Blister agent	HN3	2,2′,2″-Trichlorotriethylamine
Blister agent	HN2	*N*-Methyl-2,2′ di(chloroethyl)amine
Blister agent	HN2	*N*,*N*-bis(2-Chloroethyl)methamine
Blister agent	HN2	2,2′-Dichlorodiethylmethylamine
Blister agent	HN1	*N*-Ethyl-2,2′ di(chloroethyl) amine
Blister agent	HN1	*N*,*N*-bis(2-Chloroethyl)ethanamine
Blister agent	HN1	2,2′-Dichlorodiethylamine
Blister agent	AS-20	Distilled arsine
Blister agent	AS-20	Phenylarsine
Blister agent	AS-20	Diphenylarsine
Blister agent	Lewisite	2-Chlorovinyldichloroarsine
Blister agent	Lewisite	2-Chloroethenylarsenous dichloride
Blister agent	Lewisite	Chlorovinylarsine dichloride
Blister agent	PD	Phenyldichloroarsine
Blister agent	MD	Methyldichloroarsine
Blister agent	ED	Ethyldichloroarsine
Blood agent	Arsine	Arsenic hydride
Blood agent	Arsine	Hydrogen arsenide
Blood agent, Extreme poison	CK	Cyanogen chloride

(*continued*)

Use	Common Name	Synonyms
Blood agent, Extreme poison	CK	Chloride cyanide
Blood agent, Extreme poison	CA	Cyanogen
Blood agent, Extreme poison	CA	Ethanedinitrile
Blood agent, Extreme poison	CA	Dicyan
Blood agent, Extreme poison	CA	Oxalic acid dinitrile
Blood agent, Extreme poison	CA	Dicyanide
Blood agent, Extreme poison	AC	Hydrogen cyanide
Blood agent, Extreme poison	AC	Hydrocyanic acid
Blood agent, Extreme poison	AC	Prussic acid
Blood agent, Extreme poison	AC	Blausaure
Blood agent, Extreme poison	CK	Cyanogen chloride
Blood agent, Extreme poison	CK	Chloride cyanide
Choking agent	Phosgene	Chloroformyl chloride
Choking agent	Phosgene	Carbon oxychloride
Choking agent	Phosgene	Carbonyl chloride
Choking agent	Phosgene	Carbonic dichloride
Color enhancer	Hexachlorobenzene	
Coloring agent	Barium oxalate	
Coloring agent	Barium carbonate	
Coloring agent	Copper	
Coloring agent	Calcium oxalate	
Coloring agent	Copper acetanarsenate	
Coloring agent	Cryolite	
Coloring agent	Copper chloride	
Coloring agent	Lithium carbonate	
Coloring agent	Copper oxide	
Coloring agent	Copper carbonate	
Coloring agent, Fire retardant	Strontium carbonate	
Coloring agent, Fire retardant, Stabilizer	Strontium oxalate	

Coloring agent, Oxidizer	Strontium nitrate	
Early form of black powder	Ammonpulver	
Experimental chemical agent	Chemical agent 4-686-293-01	Agent 1-10
Experimental chemical agent	Chemical agent 4-686-293-02	Agent 1-8
Experimental chemical agent	Chemical agent 4-692-530-02	Bis{a-[(3-dimethylcarbamoxyphenyl)methylamino]}-4,4′-biacetophenone dibromide monohydrate
Experimental chemical agent	Chemical agent 4-692-530-01	Bis{a-[(3-dimethylcarbamoxy-a-picolinyl)pyrrolidinio]}-4,4′-biacetophenone dibromide monohydrate
Experimental chemical agent	Chemical agent 4-686-293-01	1,10-bis[(3-Dimethylcarbamoxy-a-picolinyl)ethylamino]decane dimethobromide 1/2 hydrate
Experimental chemical agent	Chemical agent 4-686-293-02	1,8-bis[(3-Dimethylcarbamoxy-a-picolinyl)ethylamino]octane dimethobromide monohydrate
Fuel	Magnesium	
Fuel	Iron	
Fuel	Phosphorus	
Fuel	Potassium benzoate	
Fuel	Titanium	
Fuel	Antimony	
Fuel	Sulfur	
Fuel	Antimony trisulfide	
Fuel	Aluminum	
Fuel	Charcoal	
Fuel	Carbon black	Lampblack
Fuel, Smoke ingredient	Zinc	
Fuel, Stabilizer	Petroleum jelly	Vaseline
Fuel/air explosive component	Hydrogen gas	
Green smoke produced, Screening/signaling smoke	Green smoke	

(*continued*)

Use	Common Name	Synonyms
High explosive, "Underground" literature explosive	HE mix	
High explosive, "Underground" literature explosive	Hexamethylenetretramine dinitrate	
High-temperature incendiary	Thermite	
Imnprovised propellant	TTCC	Tetraminecopper chlorate
Impact-sensitive material	PSE	Pressure-sensitive explosive
Improvised explosive	LEXP	Liquid explosive
Improvised explosive	LEXP	Liquid explosive
Improvised military propellant	TTCC	Tetraminecopper chlorate
Improvised projectile propellant	Rocket fuel	
Insulator	Clay	
Key component for many explosive manufacturing processes	Nitric Acid	
Lachrymatory agent	DA	Diphenylchloroarsine
Lachrymatory agent	Bromopicrin	Nitrobromoform
Lachrymatory agent	Bromopicrin	Bromoacquinite
Lachrymatory agent	Bromopicrin	Tribromonitromethane
Lachrymatory agent	Bromopicrin	Picfume bromide
Lachrymatory agent	CA	Chloroacetone
Lachrymatory agent	CA	1-Chloro-2-propanone
Lachrymatory agent	Chloropicrin	Nitrochloroform
Lachrymatory agent	Chloropicrin	Picfume
Lachrymatory agent	Chloropicrin	Acquinite
Lachrymatory agent	Chloropicrin	Trichloronitromethane
Lachrymatory agent	BC	1-Bromo-2-propanone
Lachrymatory agent, Severe irritant	BBC	Bromobenzylcyanide
Lachrymatory agent, Severe irritant	BBC	Camite
Lachrymatory agent, Severe irritant	BBC	a-Bromobenzeneacetonitrile

Lachrymatory agent, Severe irritant	BBC	a-Bromo-a-tolunitrile
Low explosive, "Underground" literature explosive	Flash comp	
Low explosive, "Underground" literature explosive	IEM	
Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks	Flash powder	Pyrotechnic powder
Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks	Flash powder	Flashlight powder
Low explosive, Found in many types of pyrotechnics, flash/concussion grenades, flash bangs, and fireworks	Black smoke	
Low explosive, IED filler, Black powder weapon propellant	Black powder	Gunpowder
Low explosive, IED filler, Black powder weapon propellant	Potassium chlorate	Potassium chlorate
Low explosive, Main component in smokeless powders, IED filler	Nitrocellulose	Nitrated cellulose
Low explosive, Main component in smokeless powders, IED filler	Nitrocellulose	Gun cotton
Low explosive, Main component in smokeless powders, IED filler	Nitrocellulose	Cellulose trinitrate
Low explosive, Main component in smokeless powders, IED filler	Nitrocellulose	Smokeless powder
Low explosive, Primary ingredient in many types of commercial blasting materials (i.e., ANFO, dynamite, etc.)	Ammonium nitrate	

(*continued*)

Use	Common Name	Synonyms
Nerve agent	GD	Soman
Nerve agent	GD	Trilon
Nerve agent	GD	Pinacolyl methylphosphonofluoridate
Nerve agent	GD	Methylphosphonofluoridic acid 1,2,2-tri-methylpropyl ester
Nerve agent	GAA	Tabun-II
Nerve agent	GAA	Diethylamidoethoxyphosphoryl cyanide
Nerve agent	GAA	*N*-Diethylphosphoramidocynidate
Nerve agent	GDS	ThioSoman
Nerve agent	GDS	ThioTrilon
Nerve agent	GDS	Pinacolyl methylthiophosphorusfluoridate
Nerve agent	GDS	Methylthiophosphorusfluoridic acid 1,3-tri-methylpropyl ester
Nerve agent	GDCl	Chlorosoman
Nerve agent	GDCl	Chlorotrilon
Nerve agent	GDCl	Pinacolyl methylchlorophosphorusfluoridate
Nerve agent	GDCl	Methylchlorophosphorusfluoridic acid 1,3-tri-methylpropyl ester
Nerve agent	VX	TX-60
Nerve agent	VX	Methylphosphonothioic acid *S*-[2-[bis(1-methylethyl)amino]ethyl] *O*-ethyl ester
Nerve agent	IIVX	Sub-VX,*S*-(2-dimethylaminomethyl)-*O*-ethyl methylphosphonothiolate
Nerve agent	IIVX	*O*-Ethyl *S*-[2-(dimethylamino)methyl]methylphosphonothioate
Nerve agent	GD	Soman
Nerve agent	GD	Trilon
Nerve agent	GD	Pinacolyl methylphosphonofluoridate

Nerve agent	GD	Methylphosphonofluoridic acid 1,2,2-tri-methylpropyl ester
Nerve agent	GF	Cyclosarin
Nerve agent	GF	*O*-Cyclohexylmethylfluorophosphonate
Nerve agent	GF	CMPF
Nerve agent	GS	Thiosarin
Nerve agent	GS	Sulfur sarin
Nerve agent	GS	Isopropylethylthiophosphorusfluoridate
Nerve agent	GS	Isopropylethylthiophosphorus fluoride
Nerve agent	GS	*o*-Isopropyl methyphosphonofluoridothioate
Nerve agent	GB	Isopropylmethylphosphoryl fluoride
Nerve agent	GB	Sarin
Nerve agent	GB	Trilon 46
Nerve agent	GB	Isopropylmethylphosphonofluoridate
Nerve agent	GA	Tabun
Nerve agent	GA	Dimethylamidoethoxyphosphoryl cyanide
Nerve agent	GA	Dimethylphosphoramidocyanidate
Nerve agent	Chlorosarin	ClCB
Nerve agent	Chlorosarin	Isopropylmethylphosphonochloridate
Nerve agent	Chlorosarin	Isopropoxymethylphosphoryl chloride
Nerve agent	GAA	Thiotabun
Nerve agent	GAA	Dimethylamidoethoxythiophosphorus cyanide
Nerve agent	GAA	*N*-Diethylthiophosphoroamidocyanidate
Nerve agent	GBE	Sarin-ethyl
Nerve agent	GBE	Sarin-II
Nerve agent	GBE	Isopropylethylphosphonofluoridate
Nerve agent	GBE	Isopropylethylphosphyl fluoride
Nerve agent	FTH	Fluorotabun hydrochloride
Nerve agent	FTH	Dimethylamidoethoxyphosphoryl fluoride-hydrochloride

(*continued*)

Use	Common Name	Synonyms
Nerve agent	FTH	*N*-Dimethylphosphoramidofluoridate-hydrochloride
Nerve agent	NPSF	Neopentylene thiophosphorus fluoridate
Nerve agent	NPSF	Neopentylene fluorophosphonothioate
Nerve agent	Sub-VX	*o*-Ethyl 2-ethylthioethyl methylphosphonothioate
Nerve agent	GBI	Sarin-isopropyl
Nerve agent	GBI	Sarin-III
Nerve agent	GBI	Isopropyl-2-propylphosphonofluoridate
Nerve agent	GBI	Isopropoxy-2-propylphosphoryl fluoride
Nerve agent	NPF	Neopentylene phosphoryl fluoridate
Nerve agent	NPF	Neopentylene fluorophosphate
Oxidizer	Sodium nitrate	
Oxidizer	Sodium chlorate	
Oxidizer	Potassium perchlorate	
Oxidizer	Potassium nitrate	
Oxidizer	Potassium chlorate	
Oxidizer	Ammonium nitrate	
Oxidizer	Ammonium perchlorate	
Oxidizer coloring agent	Barium nitrate	
Oxidizer coloring agent	Barium chlorate	
Poison gas used in WW I	Chlorine gas	
Primary high explosive	Barium styphnate	
Primary high explosive	Mercury azide	
Primary high explosive	SATP	Di-silver aminotetrazole perchlorate
Primary high explosive	Diazodinitrophenol	4,6-Dinitro-2-diazophenol
Primary high explosive	Silver azide	
Primary high explosive	Copper azide	
Primary high explosive	CNTA	5-Nitrotetrazole copper salt
Primary high explosive	Ammonium azide	
Primary high explosive	Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate

Primary high explosive	HGNTA	Mercury nitrotetrazole
Primary high explosive	Lead styphnate	2,4,6-Trinitro-lead-II-resorcinate
Primary high explosive	Mercury fulminate	
Primary high explosive	LNTA	Lead nitrotetrazole
Primary high explosive	TADA	5,5′′-bi1*H*-Tetrazole diammonium salt
Primary high explosive	Ammonium picramate	Ammonium 2-amino-4,6-dinitrophenolate
Primary high explosive	Ammonium picramate	Ammonium 2-amino-4,6-dinitropicrate
Primary high explosive	Ammonium picrate	
Primary high explosive	Lead picrate	2,4,6-Trinitro-lead-phenolate
Primary high explosive	Sodium picramate	Sodium 2-amino-4,6-dinitrophenolate
Primary high explosive	Sodium picramate	Sodium 2-amino-4,6-dinitropicrate
Primary high explosive	DNP	Lead picrate
Primary high explosive	Lead-TNP	Trinitrophloroglucinol lead salt
Primary high explosive	DDNP	Diazodinitrophenol
Primary high explosive	Sulfur nitride	
Primary high explosive	NTA	3,5-Dinitro-1,2,4-triazole
Primary high explosive	Mercury nitride	
Primary high explosive	Silver nitride	
Primary high explosive	Copper fulminate	
Primary high explosive	SNF	Silver nitroform
Primary high explosive	Tetraniline	Tetranitro aniline
Primary high explosive	Lead azide	
Primary high explosive	DDNP	Diazodinitrophenol
Primary high explosive	Tetrazide	Isocyanogen tetraazide
Primary high explosive	Mercury fulminate	
Primary high explosive	Tetraniline	Tetranitro aniline
Primary high explosive	Sulfur nitride	
Primary high explosive	CDNTA	3,5-Dinitro-1,2,4-triazole copper salt
Primary high explosive	Silver fulminate	

(*continued*)

Use	Common Name	Synonyms
Primary high explosive	TAEN	Triazoethanol nitrate
Primary high explosive	Diazodinitrophenol	4,6-Dinitro-2-diazophenol
Primary high explosive, Extremely pressure/impact sensitive	Nitrogen tri-iodide	Fly mines
Primary high explosive, Extremely pressure/impact sensitive, Used in ammunition primer and blasting caps	Lead azide	
Primary high explosive, Impact-sensitive material	Ammonium tri-iodide	Fly mines
Primary high explosive, Impact-sensitive material	Ammonium tri-iodide	Nitrogen tri-iodide
Produces high temperature and can melt metal	Thermite	
Produces high-temperature thermal effects	HTH	Calcium hypochlorite
Produces high-temperature thermal effects	SEI	Self-igniting incendiary
Red smoke produced, Screening/signaling smoke	Red smoke	
Replaced nitroglyercin as "main" component in dynamites	EGDN	Nitroglycol
Replaced nitroglyercin as "main" component in dynamites	EGDN	Ethylene glycol dinitrate
Secondary high explosive	ETN	Erythritol tetranitrate
Secondary high explosive	Nitroform	Trinitromethane
Secondary high explosive	TNA	1,3,5,7-Tetranitroadamantane
Secondary high explosive	DNB	4,4-Dinitro-1-butanol
Secondary high explosive	NTO	3-Nitro-1,2,4-triazol-5-one
Secondary high explosive	NDTT	5-Nitro-2(3,5-diamino-2,4,6-trinitrophenol)-1,2,4-triazole
Secondary high explosive	TNB	4,4,4-Trinitro-1-butanol
Secondary high explosive	TNEN	2,2,2-Trinitroethyl-2-nitroxyethyl ether
Secondary high explosive	NMHAN	*N*-Nitro-*N*-methylhydroxy acetamidenitrate

Secondary high explosive	NTND	2-Methyl-2-(*N*-nitro-*N*-trinitroethylamino)-1,3-propyl dinitrate
Secondary high explosive	Silver NENA	
Secondary high explosive	TND	1,4,6,9-Tetranitrodimantane
Secondary high explosive	TBA	4,4,4-Trinitrobutryaldehyde
Secondary high explosive	TNM	Tertranitromethamine
Secondary high explosive	DNP	2,4-Dinitrophenol
Secondary high explosive	TPG	2,4,6-Trinitrophloroglucinol
Secondary high explosive	DINA	Dintroxydiethylnitramine
Secondary high explosive	PEN	Pentaerithrytol trinitrate
Secondary high explosive	NG	Nitroglycerin
Secondary high explosive	Nitro starch	Nitrated cornstarch
Secondary high explosive	*N*′-Tetranitrate	
Secondary high explosive	Hexanitrate	Sorbitol hexanitrate
Secondary high explosive	Quebrachitol nitrate	Monomethyl cyclohexanepentanitrate
Secondary high explosive	MNTA	1-Methyl-3,5-dinitro-1,2,4-triazole
Secondary high explosive	MGP	*N*-Methyl gluconamide pentanitrate
Secondary high explosive	HNH-3	1,1,1,6,6,6-Hexanitrohexyne-3
Secondary high explosive	TNP	1,1,1,2-Teranitropropane
Secondary high explosive	DINA	Dintroxydiethylnitramine
Secondary high explosive	DNAN	Dintroxydiethylamine nitrate
Secondary high explosive	NENA	*N*-2-Nitroxyethyl nitramine
Secondary high explosive	PEN	Pentaerithrytol trinitrate
Secondary high explosive	Inositol nitrate	Inositol hexanitrate
Secondary high explosive	Methylene dinitramine	
Secondary high explosive	TNM	Tertranitromethamine
Secondary high explosive	TATB	1,3,5-Triamino-2,4,6-trinitrobenzene
Secondary high explosive	TATB	1,3,5-Triamino-2,4,6-trinitrobenzene
Secondary high explosive	KND	Potassium dinitramide

(*continued*)

Use	Common Name	Synonyms
Secondary high explosive	AND	Ammonium dinitramide
Secondary high explosive	DATB	1,3-Diamino-2,4,6-trinitrobenzene
Secondary high explosive	HNIW	Hexanitro-hexaazaisowurtzane
Secondary high explosive	DNR	4,6-Dinitroresorcinol
Secondary high explosive	MNA	Methylnitramine
Secondary high explosive	DMMD	2,4-Dinitro-2,4-diazapentane
Secondary high explosive	BE	Binary explosive
Secondary high explosive	ANFO	Binary explosive
Secondary high explosive	HNF	Hydrazine nitroform
Secondary high explosive	HNF	Hydrazinium nitroformate
Secondary high explosive	HNTCAB	Hexanitrotetrachloroazobenzene
Secondary high explosive	AND	Ammonium dinitramide
Secondary high explosive	Ammonium nitrate	
Secondary high explosive	Nitroform	Trinitromethane
Secondary high explosive	EDDN	Ethylenediamine dinitrate
Secondary high explosive	BDC	Biguanide diperchlorate
Secondary high explosive	Nitro-PCB	3-Nitroperchlorylbenzene
Secondary high explosive	PCB	Perchorylbenzene
Secondary high explosive	APC	Ammonium perchlorate
Secondary high explosive	TATB	1,3,5-Triamino-2,4,6-trinitrobenzene
Secondary high explosive	AC	Ammonium chlorate
Secondary high explosive	DATBA	5-Carboxy-1,3-diamino-2,4,6-trinitrobenzene
Secondary high explosive	Ammonium nitrate	
Secondary high explosive	TA	Trinitroanisole
Secondary high explosive	Methylpicric acid	2,4,6-Trinitro-3-methylphenol
Secondary high explosive	Picramic acid	2-Amino-4,6-dinitrophenol
Secondary high explosive	Styphnic acid	2,4,6-Trinito-1,3-benzenediol
Secondary high explosive	Styphnic acid	2,4,6-Trinito-1,3-benzenediol
Secondary high explosive	Picric acid	2,4,6-Trinitrophenol

Secondary high explosive	AC	Ammonium chlorate
Secondary high explosive	ADBN	4,Azido-4,4-dinitro-1-butyl nitrate
Secondary high explosive	KNF	Potassium nitroform
Secondary high explosive	NINHT	2-Nitroimino-5-nitro-hexahydro-1,3,5-triazine
Secondary high explosive	IEM	Improvised ANFO
Secondary high explosive	SOLEX	Acetyltrinitro-cyclotetramethylene tetramine
Secondary high explosive	DNFA-P	1,4-Dinitrofurazano piperazine
Secondary high explosive	TEX	Dintrotetraoxadiazatetracyclododecane
Secondary high explosive	DPT	Methylenedinitrotetraazacyclooctane
Secondary high explosive	TNTC	2,4,6-Trinitro-2,4,6-triazacyclohexanone
Secondary high explosive	DITN	Diisopropylamine trinitrate
Secondary high explosive	ADNB	4,Azido-4,4-dinitro-1-butyl acetate
Secondary high explosive	DNAT	1,1′-Dintro-3,3′-azo-1,2,4-triazole
Secondary high explosive	Rocket fuel	
Secondary high explosive	DIANP	1,5-Diazido-3-nitrazapentane
Secondary high explosive	DANP	1,3-Diazido-2-nitrazapropane
Secondary high explosive	Azidoethyl	Tris(2-azidoethyl)amine
Secondary high explosive	BDPF	Bis(1,3-diazido-2-propyl)formal
Secondary high explosive	Hexol	Hexanitrobibenzyl
Secondary high explosive	DDD	5,7-Dintiro-5,7-diaza-1,3-dioxabicyclooctane-2-one
Secondary high explosive	TCTNB	Trichlorotrinitrobenzene
Secondary high explosive	A-NPNT	4-Amino-*N*,2,3,5,6-pentanitrotoluene
Secondary high explosive	UDTNB	5-Ureido-1,3-diamino-2,4,6-trinitrobenzene
Secondary high explosive	DNPU	2,4-Dinitrophenylurea
Secondary high explosive	ADNBF	7-Amino-4,6-dinitrobenzofuroxan
Secondary high explosive	CE	Cast explosive
Secondary high explosive	TNAD	1,4,5,8-Tetranitro-1,4,5,8-tetraazadecalin
Secondary high explosive	F-TNB	1,3,5-Trifluoro-2,4,6-trinitrobenzene
Secondary high explosive	EDT	*N*,*N*′-di-2-Ethanolethylenediamine tetranitrate

(*continued*)

Use	Common Name	Synonyms
Secondary high explosive	Picryl chloride	1-Chloro-2,4,6-trinitrobenzene
Secondary high explosive	TNBCI	Trinitrobenzylchloride
Secondary high explosive	HBN	Hexanitrobibenzyl
Secondary high explosive	HNS	Hexanitrostilbene
Secondary high explosive	TNTPB	1,3,5-Trinitro-2,4,6-tripicrylbenzene
Secondary high explosive	PNT	2,3,4,5,6-Pentanitrotoluene
Secondary high explosive	HNBP	Hexanitrobiphenyl
Secondary high explosive	Hexaditon	2,2′,4,4′,6,6′-Hexanitrodiphenylmethane
Secondary high explosive, "Underground" literature explosive	Gelatin explosive	
Secondary high explosive, "Underground" literature explosive	Plastic explosive	
Secondary high explosive, "Underground" literature explosive	IEM	
Secondary high explosive, Binary High explosive, Mixture of hydrazine, aluminum, and ammonium nitrate	Astrolite	
Secondary high explosive, Blasting agent, Main charge	Nitro starch	Improvised explosive mixture
Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube"	HMX	Octagen
Secondary high explosive, By-product of RDX manufacture, Used in "Shock Tube"	HMX	Tetranitro-tetraazacyclooctane
Secondary high explosive, Found in triple-base smokeless powders	Nitroguanidine	
Secondary high explosive, Main charge-castable explosive	Picric acid	
Secondary high explosive, Main charge-castable explosive	Ammonium picrate	Explosive D

Secondary high explosive, Main charge-castable explosive	Picric acid	Improvised explosive mixture
Secondary high explosive, Main charge in many military munitions	TNT	2,4,6-Trinitrotoluene
Secondary high explosive, Main charge in many military munitions	TNT	Trinitrotoluene
Secondary high explosive, Main charge in many military munitions	Nitroglycerin	NG
Secondary high explosive, Main charge in many military munitions	Tetryl	Nitramine
Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive	RDX	Cyclonite
Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive	RDX	Cyclotrimethylethylenetrinitramine
Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive	Cyclonite	RDX
Secondary high explosive, Main charge in many military munitions, Main ingredient of plastic explosive	Cyclonite	C4
Secondary high explosive, Main ingredient in Det Cord, Found in some plastic explosives	PETN	Pentaerithrytol tetratrinitrate
Secondary high explosive, Military explosive main charge	Tetryl	*N*-Methyl-*N*,2,4,6-tetranitrobenzenamine
Secondary high explosive, Mixture of TNT and Ammonium nitrate, Military explosive	Amatol	

(*continued*)

Use	Common Name	Synonyms
Secondary high explosive, Originally developed as a military propellant, Used by terrorists as main charge	HMTD	Hexamtheylenetriperoxide Diamine
Secondary high explosive, Plastic explosive	Comp C-1	
Secondary high explosive, Used in commercial blasting operations	Dynamite	
Secondary high explosive, Used in commercial blasting operations, "Gelled" explosive	Emulsion explosive	
Secondary high explosive, Used in first World Trade Center terrorist incident	NU	Nitrourea
Secondary high explosive, Used in first World Trade Center terrorist incident	Urea nitrate	
Secondary high explosive, Used in some forms of dynamite	NG	Nitroglycerin
Severe irritant	DIM	Diimine
Severe irritant	DIM	*N*,*N*′-bis-Isopropylethylenediimine
Severe irritant	DCA	1,1-Dichloro-2-propanone
Severe irritant	DCA	1,1-Dichloroacetone
Severe irritant	CN	Chloroacetophenone
Severe irritant	CN	Mace
Severe irritant	CN	2-Chloro-1-phenylethanone
Severe irritant	CN	2-Chloroacetophenone
Severe irritant	CS	*o*-Chlorobenzalmalononitrile
Severe irritant	CS	*B*,*B*-Dicyano-*o*-chlorostyrene
Severe irritant	CS	*o*-Chlorobenzylidenemalononitrile
Smoke ingredient	Anthracene	
Smoke ingredient	Hexachloromethane	
Stabilizer	Linseed oil	
Stabilizers	Boric acid	

Stabilizers	Calcium carbonate	
Terrorist explosive used extensively in the Middle East	TATP	Tri-acetone tri-peroxide
Used to make C4-like compounds	Hexamine	Methenamine
Violent irritant	VS	Trivinylarsenic
Violent irritant	VS	Trisvinylarsine
Violent irritant	BC	Cyanogen bromide
Violent irritant	BC	Bromide cyanide
Vomiting agent	DM	Adamsite
Vomiting agent	DM	Phenarsazine chloride
Vomiting agent	DM	Diphenylaminechloroarsine
Vomiting agent	DM	10-Chloro-5,10-dihydrophenarsazine
Whistle ingredient	Potassium picrate	
White smoke produced, Screening/signaling smoke	White smoke	
Yellow smoke produced, Screening/signaling smoke	Yellow smoke	

Glossary

Glossary of Terms

Adamsite (or 10-Chloro-5) A nonpersistent harassment agent.

Agent Orange A toxic defoliant containing dioxin, of which some 64 million liters were dropped by the U.S. on Vietnam during the war, subsequently causing deformations in babies.

Amiton A nerve agent.

ANFO A mixture of ammonium nitrate and fuel oil.

Arsenic Classical poison.

Asphyxiating agent Causes choking or suffocating.

Base charge The main high explosive charge in a blasting cap.

Binary explosive Two substances that are not explosive until they are mixed.

Binary weapons Chemical weapons where the last stage of the production process is moved from the factory to the warhead where the mixing of two generally nontoxic precursor substances takes place in flight just before deployment, creating a toxic product. Advantages are that manufacture, storage, and transport are much safer for personnel handling binary chemical weapons such as Sarin (BG-2), Soman GD-2), and VX (VX-2).

Black powder A low explosive traditionally consisting of potassium nitrate, sulfur, and charcoal. Sodium nitrate may be found in place of potassium nitrate.

Black powder substitutes Modified black powder formulations such as, but not limited to, Pyrodex, Black Canyon, Golden Powder, Triple 7, Clean Shot, and Clear Shot.

Blasting agent A high explosive with low sensitivity, usually based on ammonium nitrate and not containing additional high explosives.

Blasting cap A metal tube containing a primary high explosive capable of initiating most explosives.

Blister agents Chemical agent that burns the skin and produces large water blisters on skin that heal slowly and may become infected, and cause damage to eyes, blood cells, and respiratory tract.

Blood agents Absorbed by breathing, they prevent the synthesis of molecules used by the body as energy sources so that vital organs cease to function within 15 min.

Blood gas Blocks absorption of oxygen in lungs; fast-acting surprise weapon.

Bomb A device containing an explosive, incendiary, or chemical material designed to explode.

Booby trap A concealed or camouflaged device designed to injure or kill personnel.

Booster A cap-sensitive high explosive used to initiate other less sensitive high explosives.

Brisance The shattering power associated with high explosives.

BZ (QNB) Quinuclidinebenzillate, an incapacitating psychotomimetic agent developed in the 1950s. This psychochemical hallucinogen substance affects the nervous system, causing fake visual and aural perceptions and a sense of unreality.

C4 A white pliable military plastic explosive containing primarily Cyclonite (RDX).

Cannon fuse A coated, thread-wrapped cord filled with black powder designed to initiate flame-sensitive explosives.

ChemBio Chemical/biological weapons.

Chemical agent Substance that can cause physiological changes in humans and animals.

Chemical weapons (CW) Munitions and other delivery systems that contain chemical substances intended to injure or kill or incapacitate personnel or to deny access or use of area, facilities, and materials.

Chlorine A choking agent.

Choking agents Attack respiratory tract, making membranes swell so that lungs fill with fluid whereby the victim drowns; survivors suffer chronic breathing problems.

CN (Chloracetophenone) A nonpersistent irritant used in civilian tear gas for harassment.

Combustion Any type of exothermic oxidation reaction, including, but not limited to, burning, deflagration, and detonation.

Convulsants Substances that make muscles contract.

CS gas Propanedinitrile [(2-chlorophenyl) methylene]: tear gas used for riot and crowd control.

CX Phosgene oxime: a toxic industrial chemical formerly stored by U.S.S.R. for chemical warfare, now widely available.

Cyanide chloride Blocks blood's oxygen intake.

Cyclohexyl methylphosphonogluoridate (GF) Low-volatility nerve gas, which kills through skin contact or inhalation.

Cyclo-sarin A nerve agent.

Defoliant Toxic chemical substance that causes plants to shed their leaves prematurely or unnaturally.

Deflagration An exothermic reaction that occurs particle to particle at subsonic speed.

Deta-sheet (Det-sheet) A plastic explosive in sheet form containing PETN, HMX, or RDX.

Detonation An exothermic reaction that propagates a shockwave through an explosive at supersonic speed (greater than 3300ft/sec).

Detonation cord (Det cord) A plastic- or fiber-wrapped cord containing a core of PETN or RDX.

Detonator A device used for detonating many types of high explosives.

Dimethyl methylphosphonate (DMMP) A dual-use precursor substance, usable for sarin production.

Dioxin (TCDD — 2,3,7,8-Tetrachlorodibenzoparadioxin) A by-product of Silvex herbicides production, more toxic than plutonium.

Diphenylchloroarsine A nonpersistent harassing agent.

Dirty bomb An explosive device that contains radiological/radioactive shrapnel.

Double base A smokeless powder that contains both nitroglycerin and nitrocellulose.

Dud An explosive device that has undergone a complete arming and firing cycle, but has failed to explode.

Dynamite Originally a mixture of nitroglycerin and absorbent filler that is now used to designate an entire class of high explosives.

Ethylene glycol dinitrate (EGDN) Material replacing nitroglycerin in dynamites.

Electric match A metal wire coated with a pyrotechnic mixture designed to produce a small burst of flame designed to initiate a low explosive.

Electric squib A metal wire surrounded by a pyrotechnic mixture and encased within a metal tube, which produces a small jet of flame designed to initiate a low explosive.

EOD Explosive ordnance disposal.

Explosion A rapid expansion of gases resulting from a chemical or physical action that produces a pressure wave.

Explosive An energetic material capable of producing an explosion.

Explosive compound A single chemical compound capable of causing an explosion.

Explosive mixture A mixture of chemical compounds capable of causing an explosion.

Explosive train A series of combustible or explosive components arranged in order of decreasing sensitivity designed to initiate explosives.

Firing train See "Explosive train."

First responder The first trained emergency response person on the scene.

Flex-X See "Det sheet."

Frag Any items produced and cast away from an explosion.

Fuel Any substance capable of reacting with oxygen or oxygen-carriers (oxidizers).

Fuse A fiber-wrapped cord of black powder used to initiate blasting caps or low explosives.

Fuze A mechanical, chemical, or electrical device designed to initiate an explosive train.

GA Tabun (Phosphoramidocyanidic acid, Dimethyl ethyl ester): the first nerve gas, discovered in 1936.

GB (Sarin phosphonoflouridic acid, Methyl, 1-Methylethyl ester) A colorless, odorless nerve gas, discovered in 1939.

GD (Soman — Phosphonoflouridic acid, Methyl, 1,2,2-Trimethyl-propyl ester [R-(R*,R*)]) A nerve agent discovered in 1944.

Gunpowder See "Black powder."

HAZMAT Hazardous materials.

HD Mustard gas, Mustard sulphur (Ethane,1,1-thiobis[2-chloro-]): a blister agent.

Hemlock A poison.

Herbicide A chemical agent that is toxic to plants and crops, also used as defoliant.

High explosive Generally a chemical substance or mixture capable of detonation.

HMX Octagen, a high explosive formed as a by-product during the manufacture of RDX.

Hoax A dummy device intended to appear as a bomb but not containing an explosive.

Hobby fuse See "Cannon fuse."

Household cleaning agents Some, like oven cleaners, are chemically very aggressive.

HT (Mixture of HD and T by weight) A blister agent.

Hydrogen cyanide An agent that blocks the blood's oxygen intake.

ICS Incident command system.

IED Improvised explosive device.

Improvised explosive device (IED) A noncommercially produced device designed to explode.

Incapacitantia Chemical substances that temporarily produce physiological or psychological debilitation, rendering a person incapable of performing or functioning normally.

Incendiary A compound, metal, or mixture capable of producing intense heat.

Inert A simulated explosive or device that contains no explosive, pyrotechnic, or chemical/biological agent.

Initiator The part of an explosive train that starts the reaction.

Insecticides Various types are close to weaponized nerve gas in their chemical structures.

Large Vehicle Bomb (LVB) A vehicle containing large quantities of explosives and designed to act as a WMD.

Low explosive Generally a chemical compound or mixture that can deflagrate without the addition of atmospheric oxygen.

LSD (Lysergic acid diethylamide) Psychedelic drug and hallucinogen used as incapacitating agent.

Main charge The main or final explosive component in an explosive train.

Munitions Any and all military explosives.

Munroe effect The focusing of the force produced by an explosion, resulting in an increased pressure wave.

Mustard gas A World War I weapon causing skin blisters and lung burns.

Nerve agents Highly toxic and potentially lethal chemical agents that affect the human nervous system by inhibiting the enzyme that aids the transmission of nerve impulses. Causes blurred vision, weeping, nausea, vomiting, urinary incontinence, respiratory distress, and reduced mental capability by attacking the nervous system.

Nerve gases Probably the most widely stocked chemical agents: liquid, gas or aerosol toxins belonging to the group of organophosphorus compounds, which are absorbed by the skin or lungs, usually within 20 to 30 minutes.

NFPA National Fire Protection Association.

Nitrocellulose (NC) Main component in smokeless powder, i.e., gun cotton.

Nitroglycerin (NG) Explosive material, originally the basis for dynamite.

Oleander extract A poison.

Ordnance See "Munitions."

OSHA Occupational Safety and Health Administration.

Oxidizer A chemical compound that supplies the oxygen in a chemical reaction.

Parathion A commercially available potent toxic insecticide.

PENO Plastic explosive comprised of PETN and a binder material.

Pesticides Some pesticides brought on the market in the 1950s contained nerve agents.

PETN Pentaerythritoltetranitrate: a high explosive used in many applications.

Phosgene (Carbonyl chloride: COCl) A colorless poisonous choking agent (gas) used in warfare before more potent agents were discovered.

Pilocarpine A poison used by secret services.

Plastic-Bonded Explosives (PBX) A high explosive in a pliable plastic matrix, i.e., C4, Det flex.

Plastic explosives Common term for PBX.

Precursor chemical materials Substances that following chemical processing and combinations, form building blocks for the construction of chemical weapons.

Primary fragmentation Fragments generated by the initial explosion or blast.

Primary high explosive A high explosive sensitive to heat, shock, spark, and/or friction.

Primer See "Initiator."

Primer cap A small metal device containing an impact-sensitive primary high explosive commonly found in ammunition or used in initiators.

Psychotomimetic agent Chemical agent (e.g., BZ) that damages the central nervous system and causes loss of feeling, paralysis, etc., resembling some psychotic disorders.

Pyrotechnic fuse See "Cannon fuse."

Pyrotechnic mixtures An oxidizer/fuel mixture that produces bright or colored lights, heat, fogs, or acoustic effects.

RDD Radiological dispersive device, i.e., dirty bomb.

RDX Cyclonite, high explosive used in PBX and other applications.

Report A loud sound produced by an explosion.

Riot control agent A chemical substance used for crowd control, e.g., pepper spray or tear gas.

RVX Nerve agent.

Safety fuse A waterproof coated, thread-wrapped cord filled with black powder designed for initiating a nonelectric blasting cap.

Sarin (GB) Isopropyl methylphosonofluoridate: a colorless, odorless volatile nerve gas synthesized at I.G. Farben, Germany, in 1938.

Secondary fragmentation Fragments produced by primary fragments striking objects and imparting explosive inertia to them.

Secondary high explosive A less sensitive high explosive initiated by another explosive.

Semtex Plastic explosive containing cyclonite (RDX) and pentaerythritoltetranitrate (PETN), made in Czech Republic.

Shaped charge An explosive device that is designed to direct or focus explosive energy into a narrow jet.

Shock tube Hollow plastic tube with a thin coating of HMX and powdered aluminum used in nonelectric firing systems.

Shrapnel Objects that are attached to the outside or included inside a device or the container walls themselves that increase the blast damage and injure or kill personnel.

Single base A smokeless powder that contains nitrocellulose, but does not contain nitroglycerin or nitroguanidine.

Smokeless powder A low explosive used in ammunition as a propellant, which can be single, double, or triple based.

Soman (GD) Pinoacolyl methylphosphonogluoridate: fastest-killing nerve gas, produced in 1944 for the first time at I.G. Farben, Germany; kills both through inhalation and skin contact.

Tabun (GA) *o*-Ethyl dimethylamidophosphorylcyanide: first nerve gas, developed in 1936 at I.G. Farben, Germany; easy to manufacture since the necessary chemicals are available in the open market.

Tear gas (CN — Cloroacetophenone, CR — Dibenz (b,f)-1,4-oxaze-pine; CS — Orthochlorobenzylide-nemaonitrile) A substance that causes pain in the eyes, flow of tears, and difficulty in keeping eyes open.

TEPP Commercially available potent insecticide; almost as toxic as some military chemical warfare agents.

Triple base A smokeless powder that contains nitrocellulose, nitroglycerin, and nitroguanidine.

V-agents A group of stable nerve agents that are about ten times more toxic than Sarin.

VX (Phosphonothioic acid, Methyl-*S*-[2-[bis(1-methylethyl)amino]ethyl] *o*-Ethyl ester) An odorless, colorless liquid that disrupts the stimulus from nerve to muscle in the human body, causing convulsions, paralysis, and death.

Vomit gas Super teargas, favored by the former Soviet Union.

Weapon of mass destruction (WMD) Any type weapon that is capable of causing large-scale destruction and/or mass casualties.

Appendix A
Chemical Structures

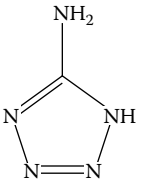

Figure A.1 5-Aminotetrazole: ingredient used to make primary explosives.

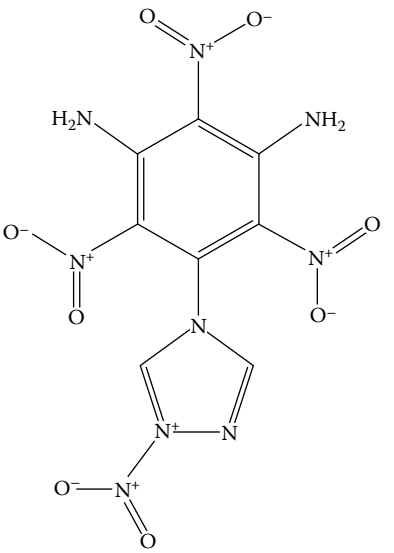

Figure A.2 5NDTT: secondary high explosive.

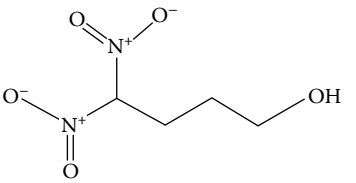

Figure A.3 4,4 DNB: secondary high explosive.

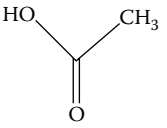

Figure A.4 Acetic acid: ingredient used to make primary/secondary explosives and chemical weapons.

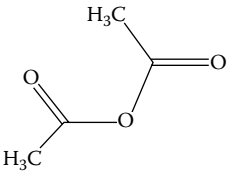

Figure A.5 Acetic anhydride: ingredient used to make secondary explosives.

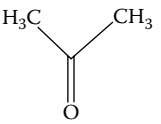

Figure A.6 Acetone: ingredient used to make primary/secondary explosives and chemical weapons.

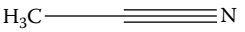

Figure A.7 Acetonitrile: ingredient used to make secondary explosives and chemical weapons.

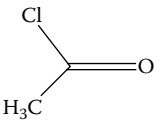

Figure A.8 Acetyl chloride: ingredient used to make blister agents and some secondary explosives.

Figure A.9 Acetylene: ingredient used to make blister agents.

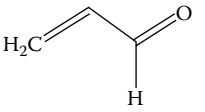

Figure A.10 Acrolein: ingredient used to make secondary explosives.

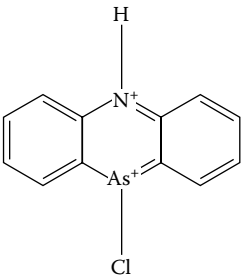

Figure A.11 Adamsite: vomiting agent.

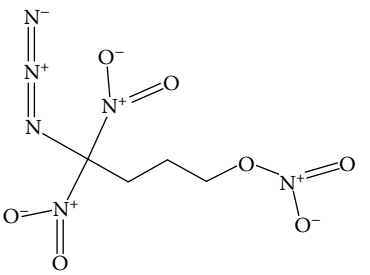

Figure A.12 ADBN: secondary high explosive.

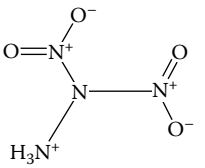

Figure A.13 AND: secondary high explosive.

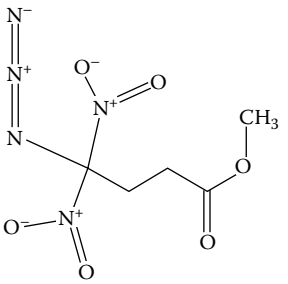

Figure A.14 ADBN: secondary high explosive.

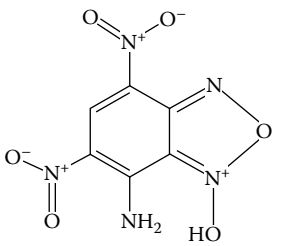

Figure A.15 ADNBF: secondary high explosive.

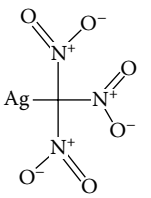

Figure A.16 AgNF: primary high explosive.

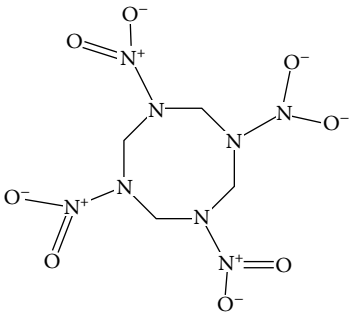

Figure A.17 *a*-HMX: secondary high explosive.

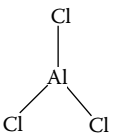

Figure A.18 Aluminum chloride: ingredient used to make secondary explosives and chemical weapons.

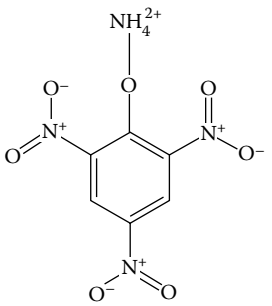

Figure A.19 Ammonium picrate: secondary high explosive.

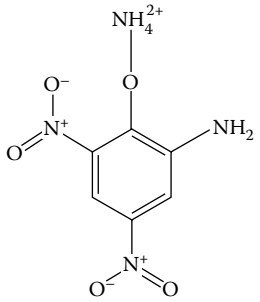

Figure A.20 Ammonium picramate: primary high explosive.

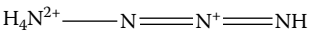

Figure A.21 Ammonium azide: primary high explosive.

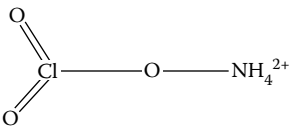

Figure A.22 Ammonium chlorate: low explosive, incendiary, pyrotechnic material.

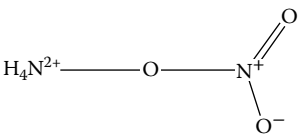

Figure A.23 Ammonium nitrate: low explosive, pyrotechnic ingredient, oxidizer.

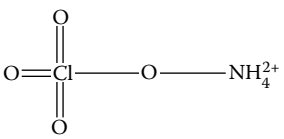

Figure A.24 Ammonium perchlorate: low explosive, pyrotechnic ingredient, oxidizer.

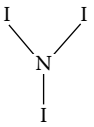

Figure A.25 Ammonium tri-iodide: primary high explosive, impact sensitive material.

Figure A.26 Anhydrous ammonia: ingredient used to make primary and secondary explosives.

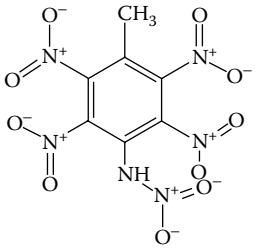

Figure A.27 ANPNT: secondary high explosive.

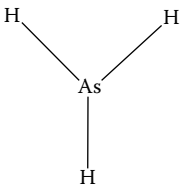

Figure A.28 Arsenic hydride: blood agent.

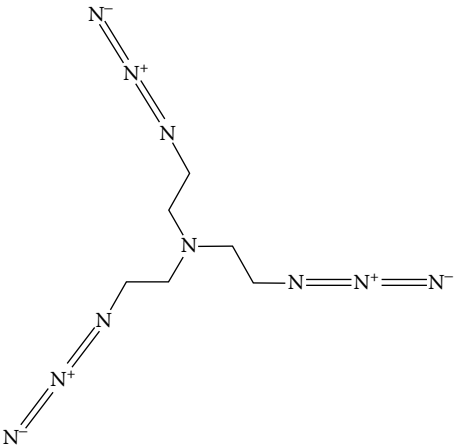

Figure A.29 Azidoethyl: secondary high explosive.

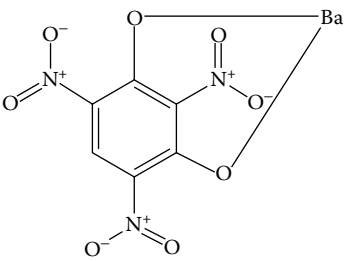

Figure A.30 Barium styphinate: primary high explosive.

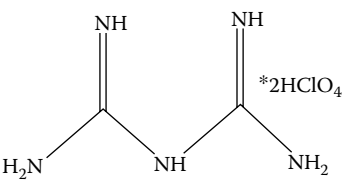

Figure A.31 BDC: secondary high explosive.

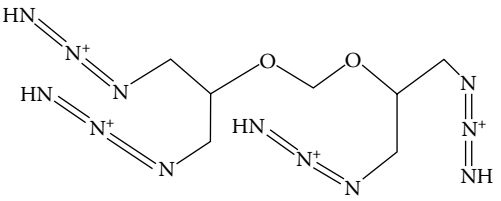

Figure A.32 BDPF: secondary explosive.

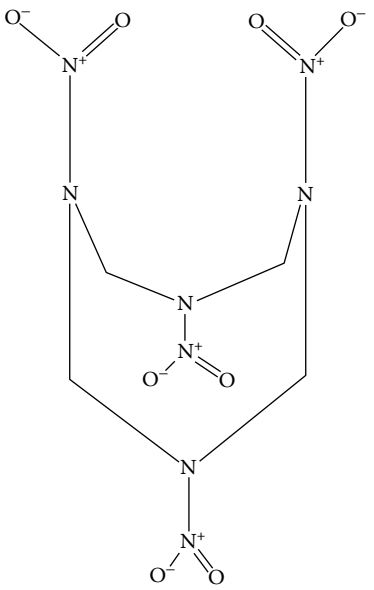

Figure A.33 b-HMX: secondary high explosive.

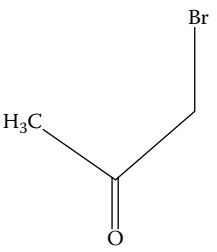

Figure A.34 Bromoacetone: lachrymatory agent.

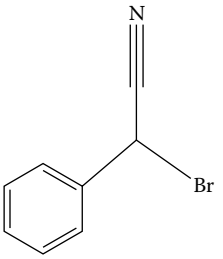

Figure A.35 BBC: lachrymatory agent.

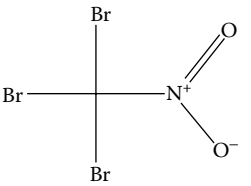

Figure A.36 Bromopicrin: lachrymatory agent.

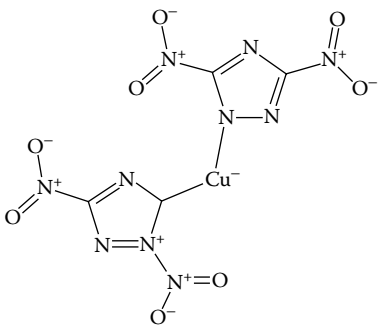

Figure A.37 CDNTA: primary high explosive.

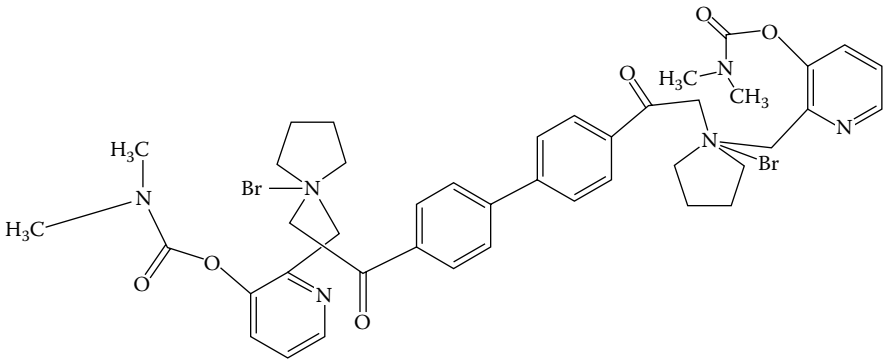

Figure A.38 Chemical agent 4-962-530-01: experimental chemical weapon.

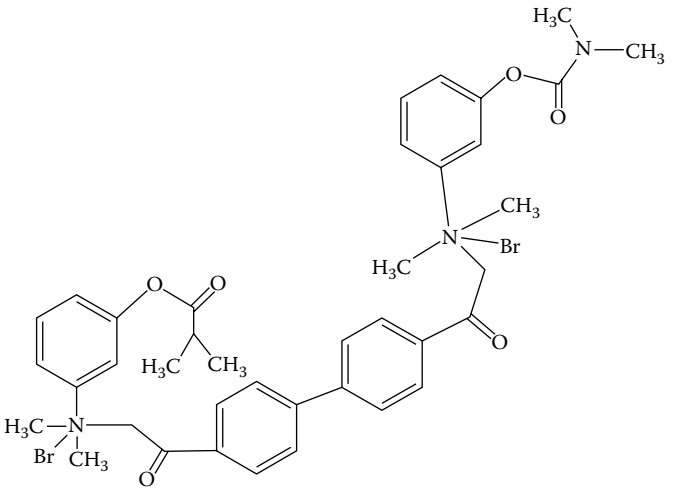

Figure A.39 Chemical agent 4-962-530-02: experimental chemical weapon.

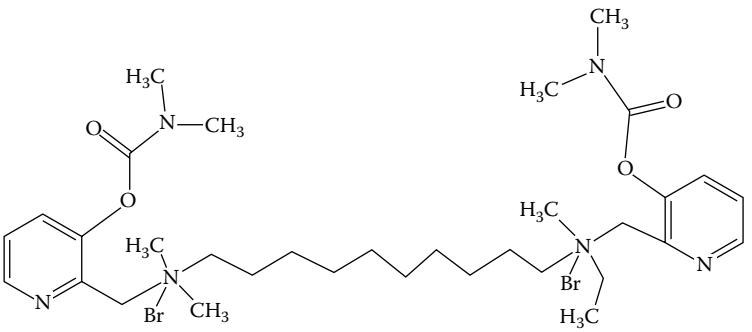

Figure A.40 Chemical agent 4-686-293-01: experimental chemical weapon.

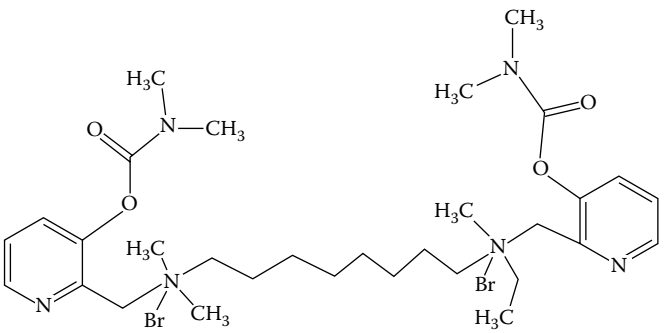

Figure A.41 Chemical agent 4-686-293-02: experimental chemical weapon.

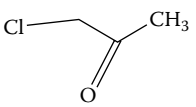

Figure A.42 Chloroacetone: lachrymatory agent.

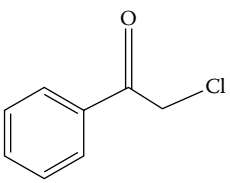

Figure A.43 Chloroacetophenone: severe irritant.

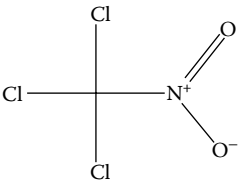

Figure A.44 Chloropicrin: lachrymatory agent.

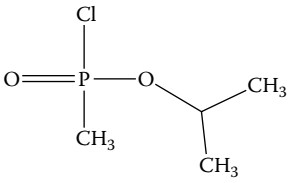

Figure A.45 Chlorosarin: nerve agent.

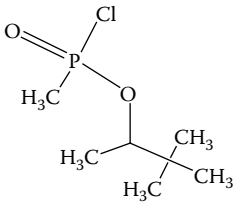

Figure A.46 Chlorosoman: nerve agent.

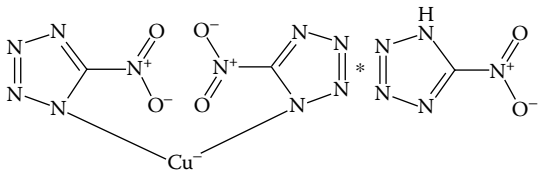

Figure A.47 CNTA: primary high explosive.

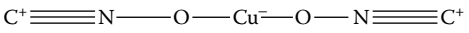

Figure A.48 Copper fulminate: primary high explosive.

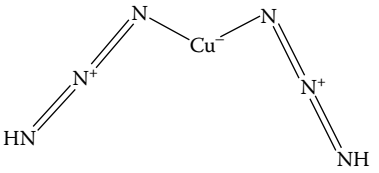

Figure A.49 Cupric azide: primary high explosive.

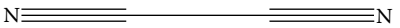

Figure A.50 Cyanogen: blood agent, extreme poison.

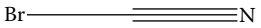

Figure A.51 Cyanogenbromide: violent irritant.

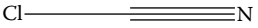

Figure A.52 Cyanogenchloride: blood agent.

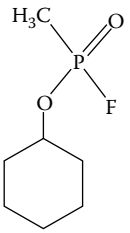

Figure A.53 Cyclosarin: nerve agent.

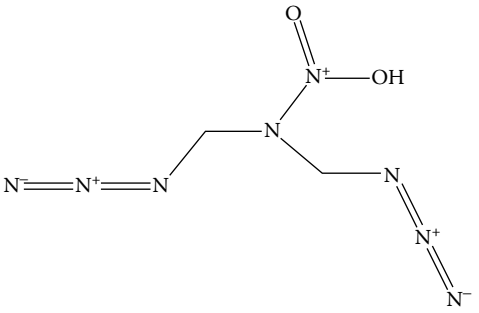

Figure A.54 DANP: secondary high explosive.

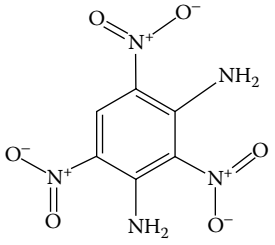

Figure A.55 DATB: secondary high explosive.

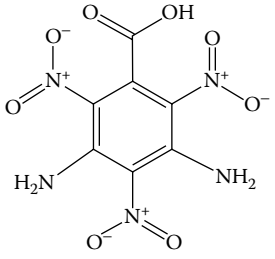

Figure A.56 DATBA: secondary high explosive.

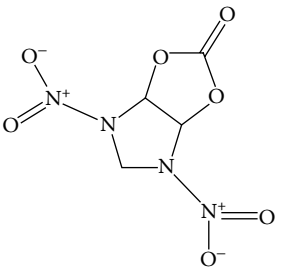

Figure A.57 DDD: secondary high explosive.

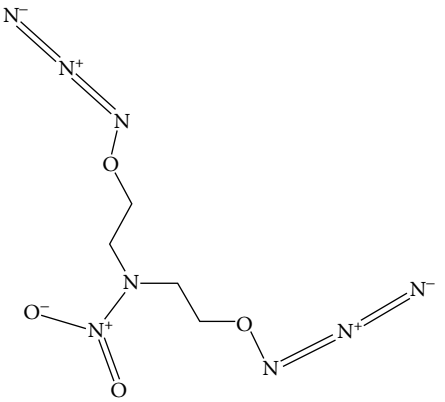

Figure A.58 DIANP: secondary high explosive.

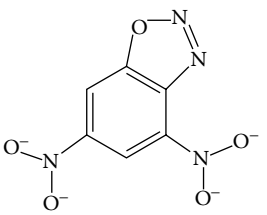

Figure A.59 Diazodinitrophenol: primary high explosive.

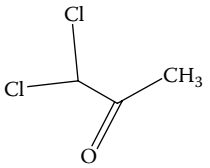

Figure A.60 Dichloroacetone: severe irritant.

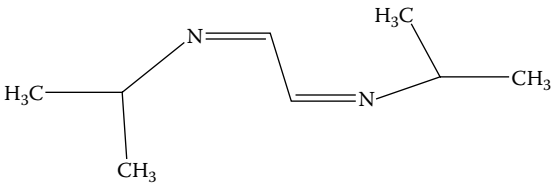

Figure A.61 Diimine: severe irritant.

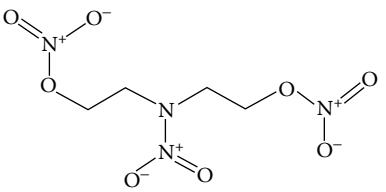

Figure A.62 DINA: secondary high explosive.

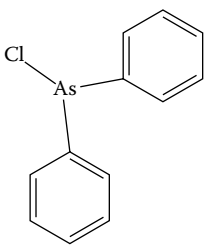

Figure A.63 Diphenylchloroarsine: lachrymatory agent.

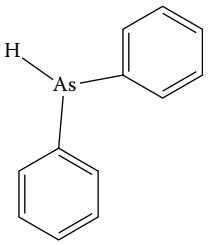

Figure A.64 Distilled arsine: blister agent.

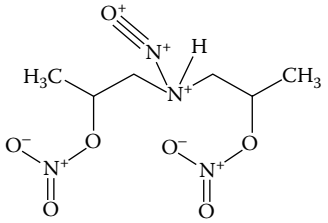

Figure A.65 DITN: secondary high explosive.

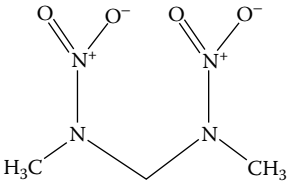

Figure A.66 DMMD: secondary high explosive.

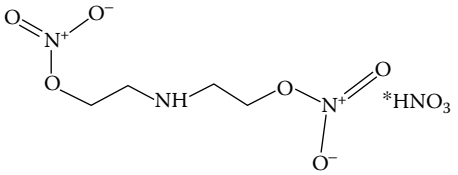

Figure A.67 DNAN: secondary high explosive.

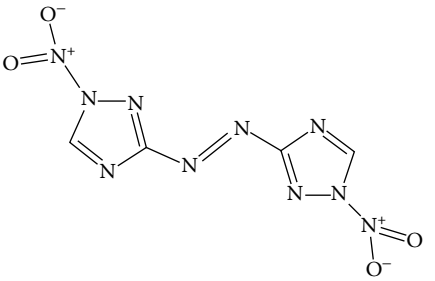

Figure A.68 DNAT: secondary high explosive.

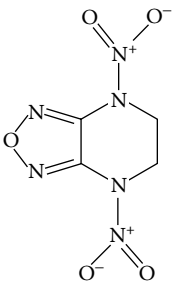

Figure A.69 DNFA-P: secondary high explosive.

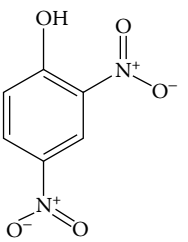

Figure A.70 DNP: primary high explosive.

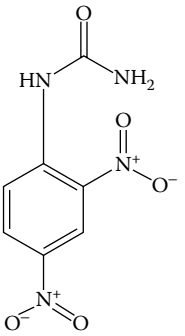

Figure A.71 DNPU: secondary high explosive.

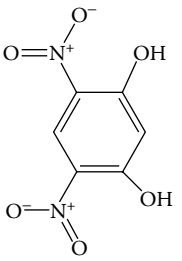

Figure A.72 DNR: secondary high explosive.

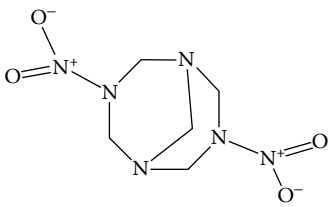

Figure A.73 DPT: secondary high explosive.

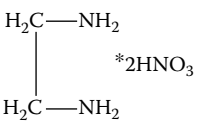

Figure A.74 EDDN: secondary high explosive.

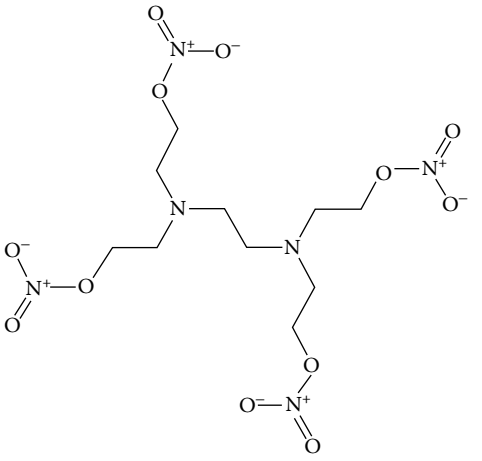

Figure A.75 EDT: secondary high explosive.

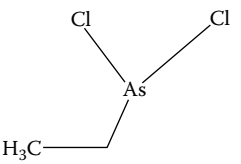

Figure A.76 Ethyldichloroarsine: blister agent.

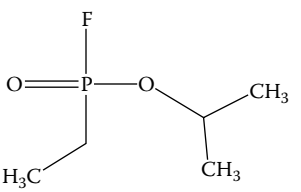

Figure A.77 Sarin-ethyl: nerve agent.

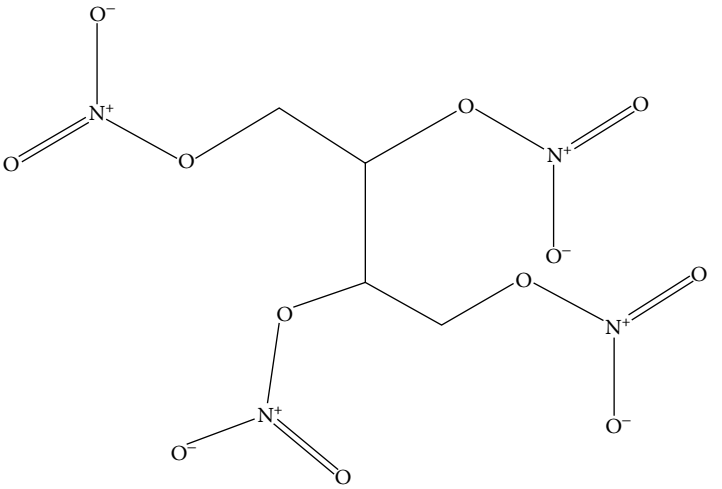

Figure A.78 ETN: secondary high explosive.

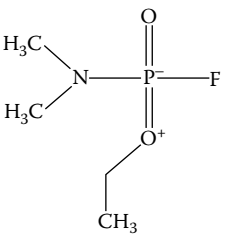

Figure A.79 Fluorotabun: nerve agent.

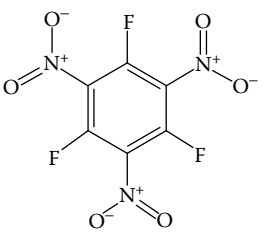

Figure A.80 F-TNB: secondary high explosive.

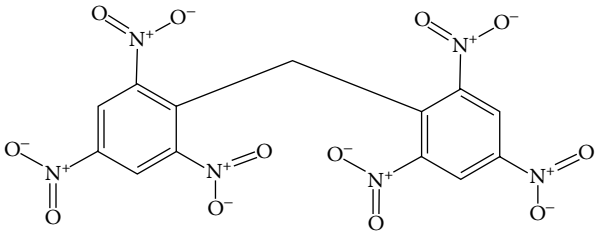

Figure A.81 Hexaditon: secondary high explosive.

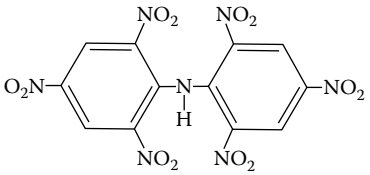

Figure A.82 Hexamine: used to make C4-like compounds.

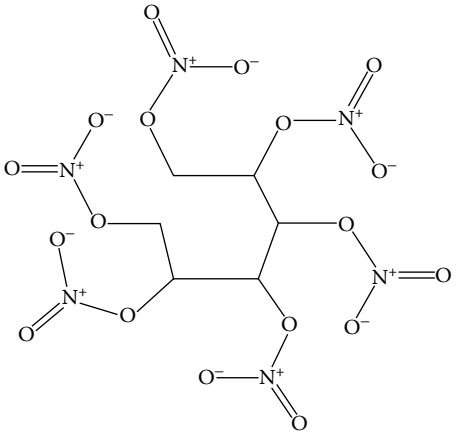

Figure A.83 Hexanitrate: secondary high explosive.

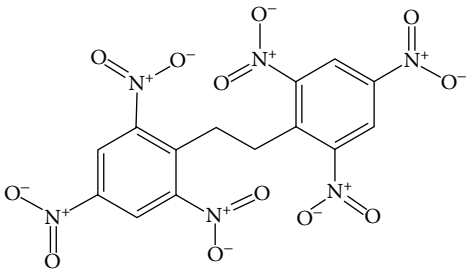

Figure A.84 Hexol: secondary high explosive.

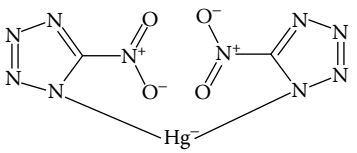

Figure A.85 HGNTA: primary high explosive.

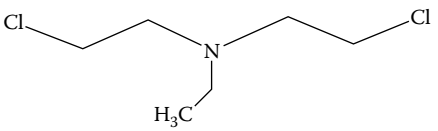

Figure A.86 HN1: blister agent.

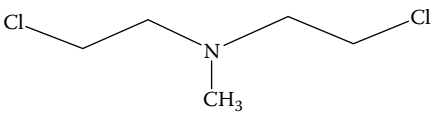

Figure A.87 HN2: blister agent.

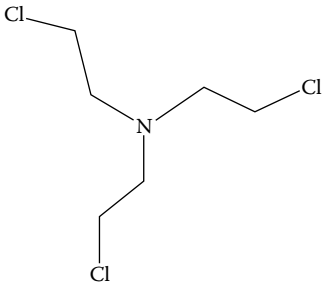

Figure A.88 HN3: blister agent.

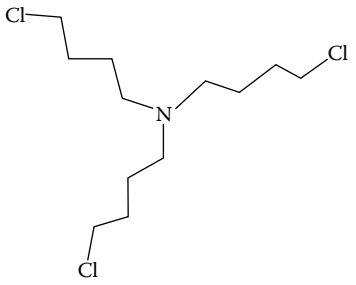

Figure A.89 HN4: blister agent.

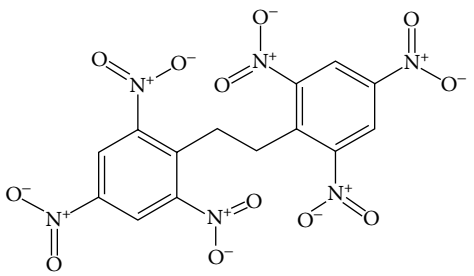

Figure A.90 HNB: secondary high explosive.

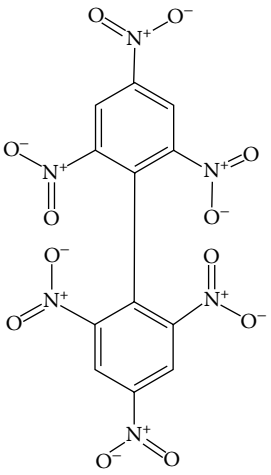

Figure A.91 HNBP: secondary high explosive.

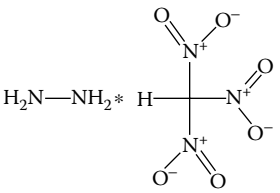

Figure A.92 HNF: secondary high explosive.

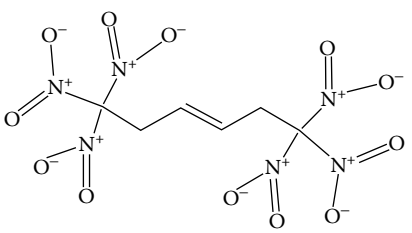

Figure A.93 HNH-3: secondary high explosive.

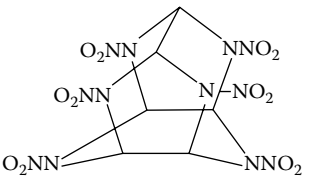

Figure A.94 HNIW: secondary high explosive.

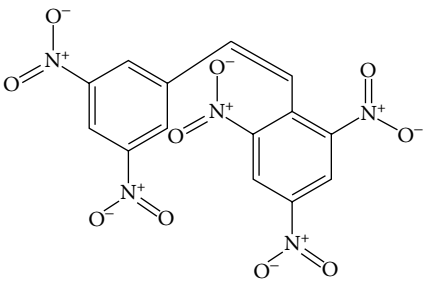

Figure A.95 HNS: secondary high explosive.

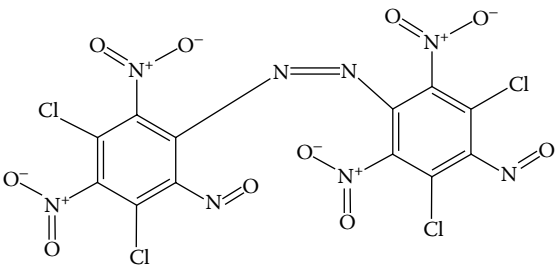

Figure A.96 HNTCAB: secondary high explosive.

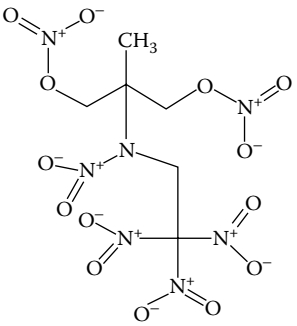

Figure A.97 HTND: secondary high explosive.

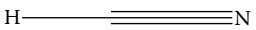

Figure A.98 AC: blood agent.

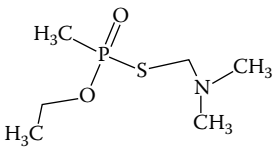

Figure A.99 IIVX: nerve agent.

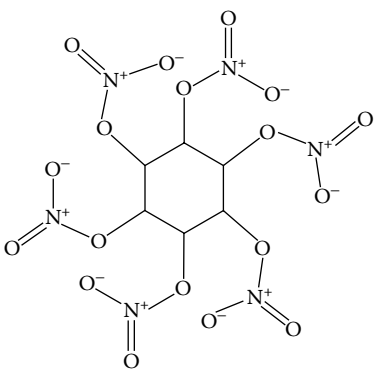

Figure A.100 Inositol nitrate: secondary high explosive.

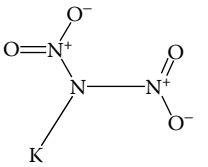

Figure A.101 KDN: secondary high explosive.

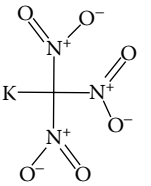

Figure A.102 KNF: secondary high explosive.

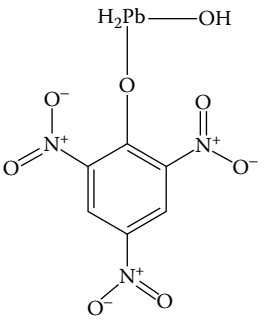

Figure A.103 Lead picrate: primary high explosive.

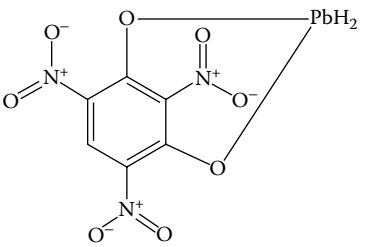

Figure A.104 Lead styphnate: primary high explosive.

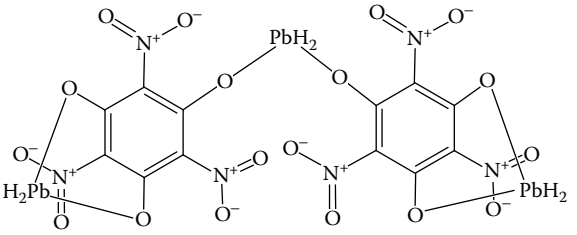

Figure A.105 Lead-TNP: primary high explosive.

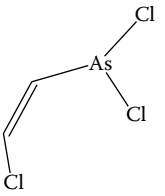

Figure A.106 Lewisite: blister agent.

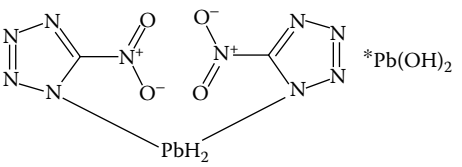

Figure A.107 LNTA: primary high explosive.

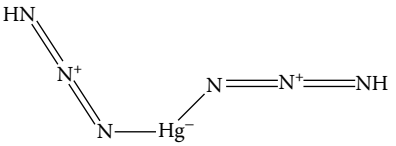

Figure A.108 Mercury azide: primary high explosive.

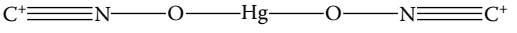

Figure A.109 Mercury fulminate: primary high explosive.

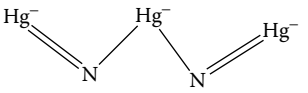

Figure A.110 Mercury nitride: primary high explosive.

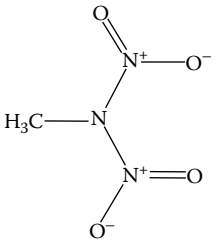

Figure A.111 Methylene dinitramine: secondary high explosive.

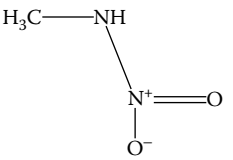

Figure A.112 Methylnitramine: secondary high explosive.

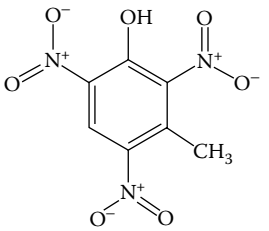

Figure A.113 Methylpicric acid: secondary high explosive.

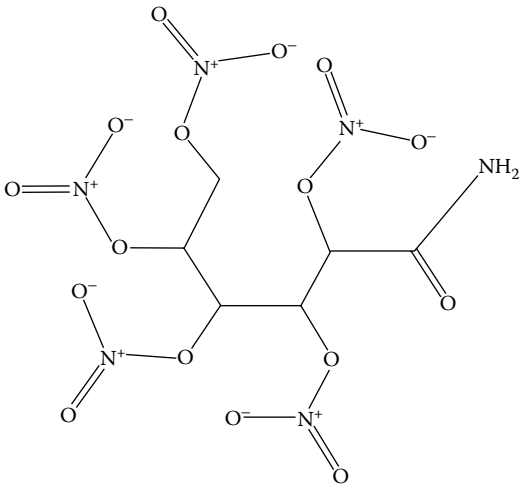

Figure A.114 MGP: secondary high explosive.

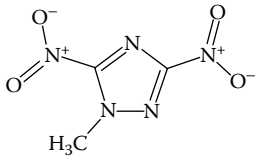

Figure A.115 MNTA: secondary high explosive.

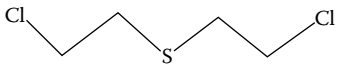

Figure A.116 Mustard gas: blister agent.

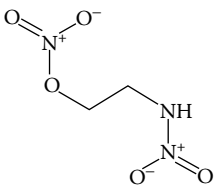

Figure A.117 NENA: secondary high explosive.

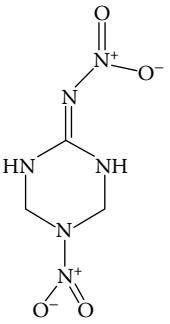

Figure A.118 NINHT: secondary high explosive.

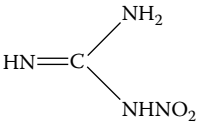

Figure A.119 Nitrocellulose: low explosive, main component in smokeless powders, IED filler.

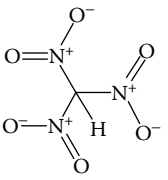

Figure A.120 Nitroform: secondary high explosive.

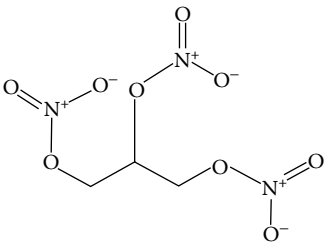

Figure A.121 NG: secondary high explosive.

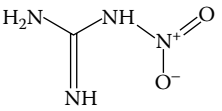

Figure A.122 Nitroguandine: secondary high explosive, found in triple base smokeless powders.

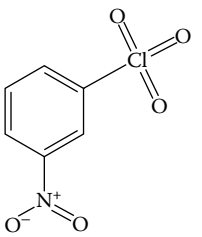

Figure A.123 Nitro-PCB: secondary high explosive.

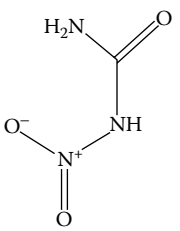

Figure A.124 Nitrourea: secondary high explosive, used in first World Trade Center terrorist incident.

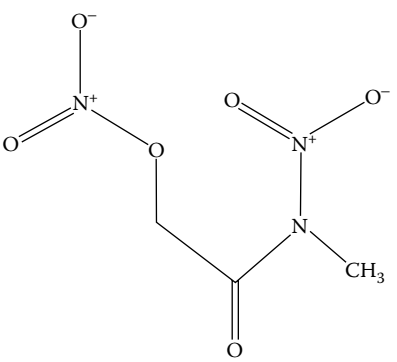

Figure A.125 NMHAN: secondary high explosive.

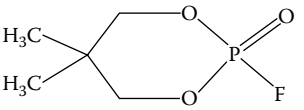

Figure A.126 NPF: nerve agent.

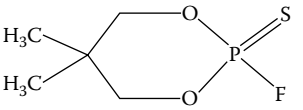

Figure A.127 NPSF: nerve agent.

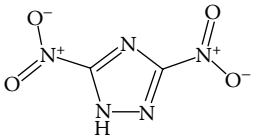

Figure A.128 NTA: primary high explosive.

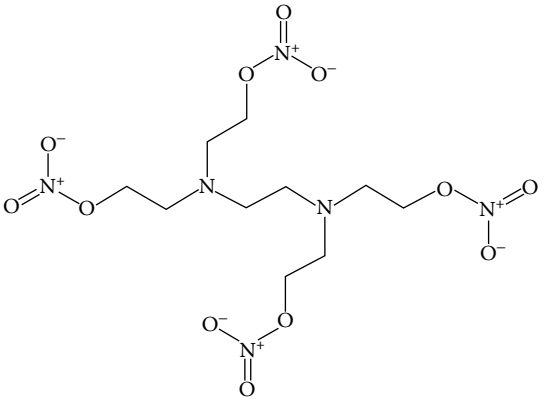

Figure A.129 *N*′-Tetranitrate: secondary high explosive.

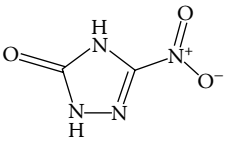

Figure A.130 NTO: secondary high explosive.

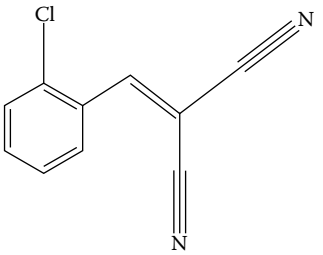

Figure A.131 o-Chlorobenzalmalononitrile: severe irritant.

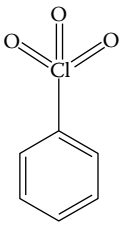

Figure A.132 PCB: secondary high explosive.

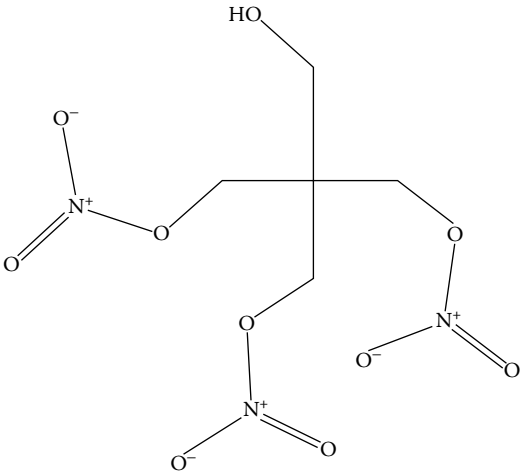

Figure A.133 PEN: secondary high explosive.

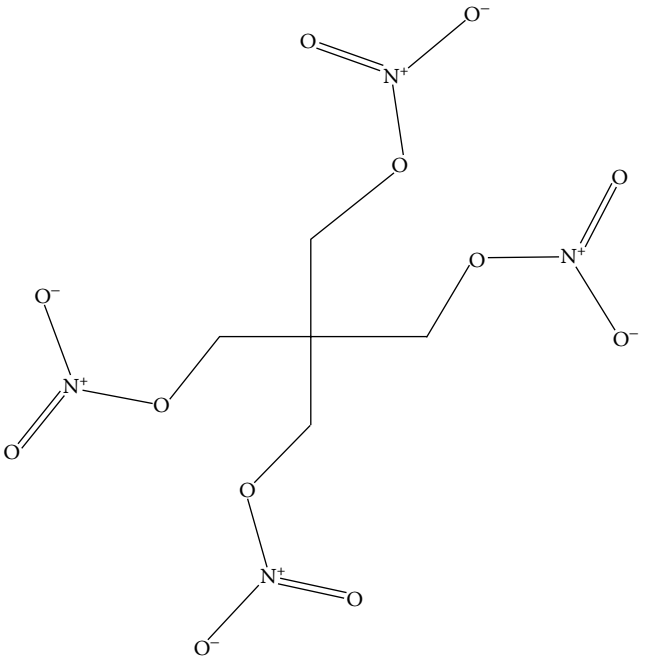

Figure A.134 PETN: secondary high explosive.

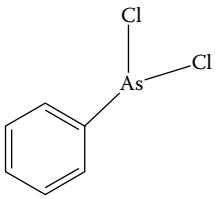

Figure A.135 Phenyldichloroarsine: blister agent.

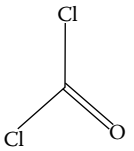

Figure A.136 Phosgene: chocking agent.

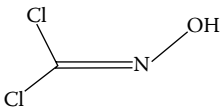

Figure A.137 Phosgene oxime: blister agent.

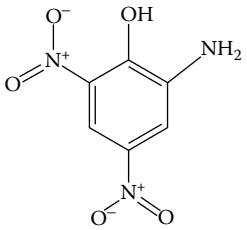

Figure A.138 Picramic acid: secondary high explosive.

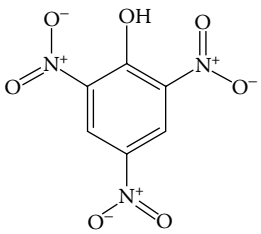

Figure A.139 Picric acid: secondary high explosive.

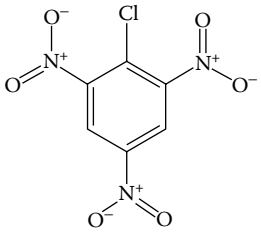

Figure A.140 Picryl chloride: secondary high explosive.

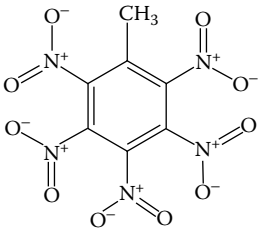

Figure A.141 PNT: secondary high explosive.

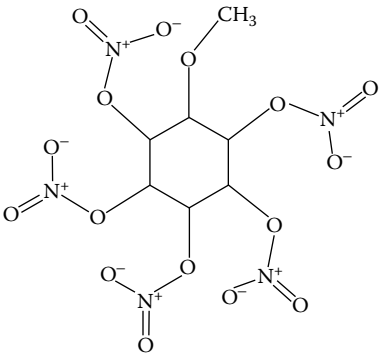

Figure A.142 Quebrachitol nitrate: secondary high explosive.

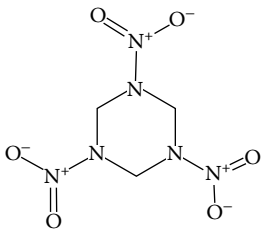

Figure A.143 RDX: secondary high explosive.

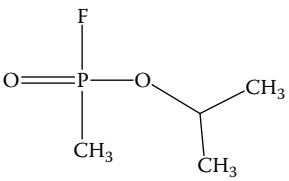

Figure A.144 Sarin: nerve agent.

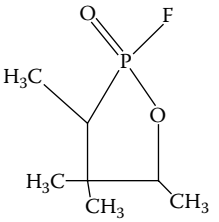

Figure A.145 Sarin-isopropyl: nerve agent.

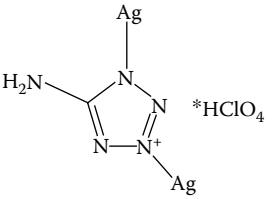

Figure A.146 SATP: primary high explosive.

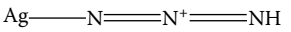

Figure A.147 Silver azide: primary high explosive.

Figure A.148 Silver fulminate: primary high explosive.

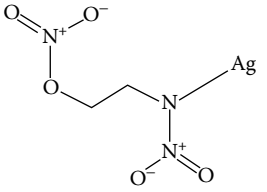

Figure A.149 Silver NENA: secondary high explosive.

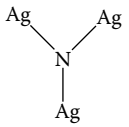

Figure A.150 Silver nitride: primary high explosive.

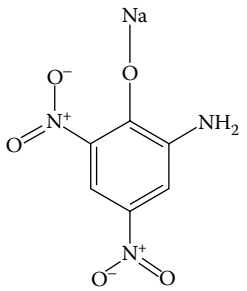

Figure A.151 Sodium picramate: primary high explosive.

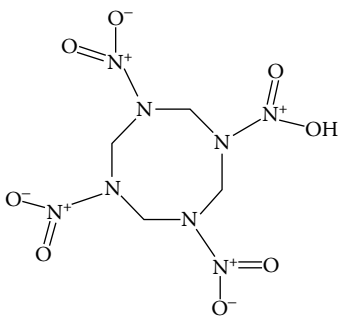

Figure A.152 SOLEX: secondary high explosive.

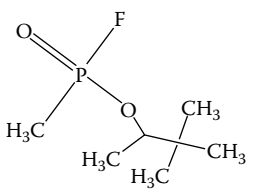

Figure A.153 Soman: nerve agent.

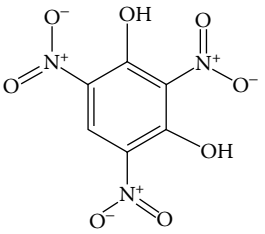

Figure A.154 Styphnic acid: secondary high explosive.

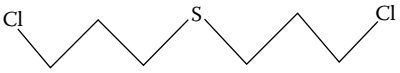

Figure A.155 Sulfur mustard II: blister agent.

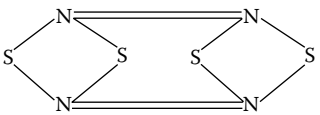

Figure A.156 Sulfur nitride: secondary high explosive.

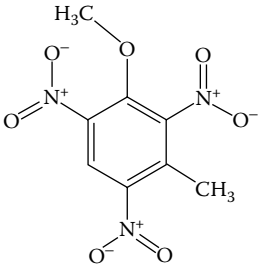

Figure A.157 TA: secondary high explosive.

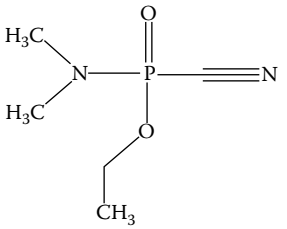

Figure A.158 Tabun: nerve agent.

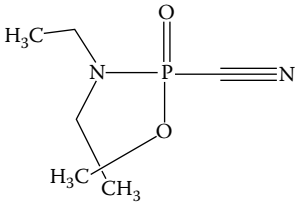

Figure A.159 Tabun-II: nerve agent.

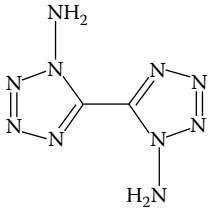

Figure A.160 TADA: primary high explosive.

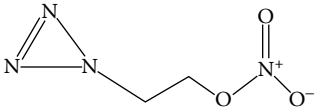

Figure A.161 TAEN: primary high explosive.

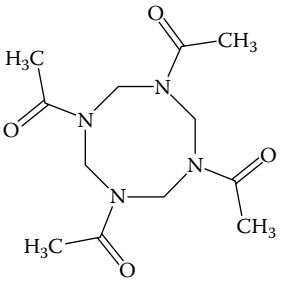

Figure A.162 TAT: secondary high explosive.

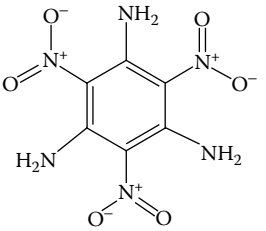

Figure A.163 TATB: secondary high explosive.

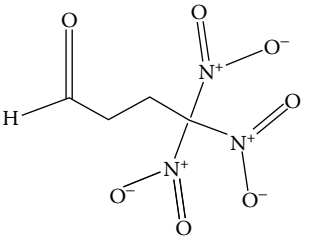

Figure A.164 TBA: secondary high explosive.

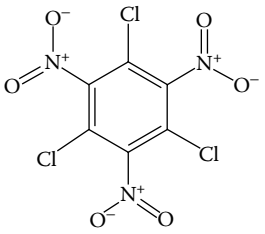

Figure A.165 TCTNB: secondary high explosive.

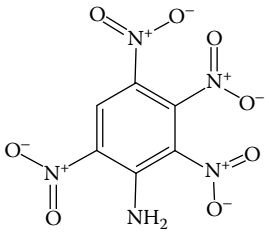

Figure A.166 Tetraniline: primary high explosive.

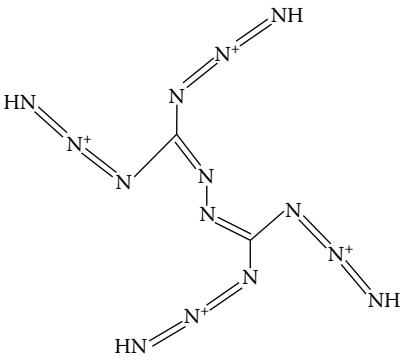

Figure A.167 Tetrazide: primary high explosive.

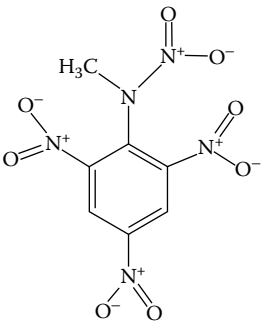

Figure A.168 Tetryl: secondary high explosive, military explosive main charge.

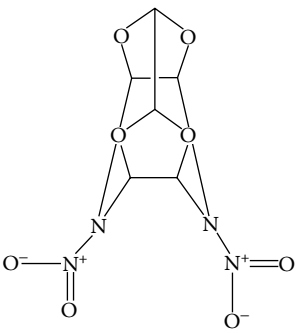

Figure A.169 TEX: secondary high explosive.

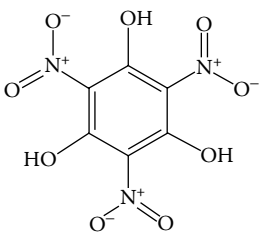

Figure A.170 TGP: secondary high explosive.

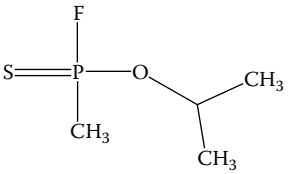

Figure A.171 Thiosarin: nerve agent.

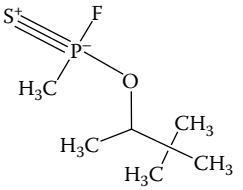

Figure A.172 Thiosoman: nerve agent.

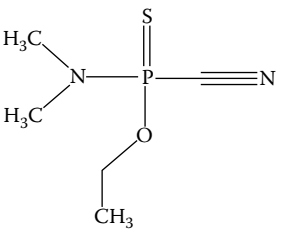

Figure A.173 Thiotabun: nerve agent.

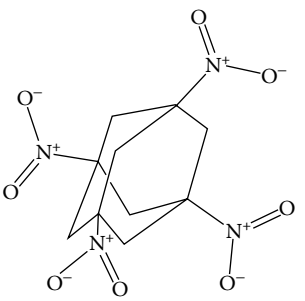

Figure A.174 TNA: secondary high explosive.

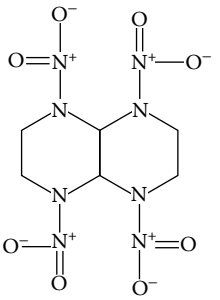

Figure A.175 TNAD: secondary high explosive.

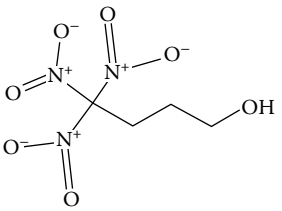

Figure A.176 TNB: secondary high explosive.

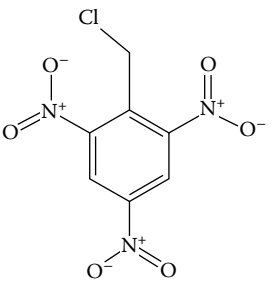

Figure A.177 TNBCI: secondary high explosive.

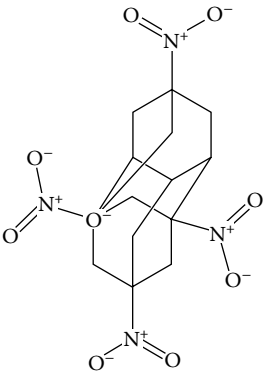

Figure A.178 TND: secondary high explosive.

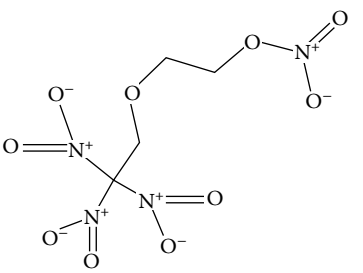

Figure A.179 TNEN: secondary high explosive.

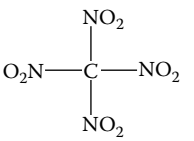

Figure A.180 TNM: secondary high explosive.

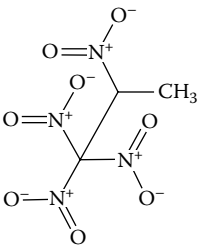

Figure A.181 TNP: secondary high explosive.

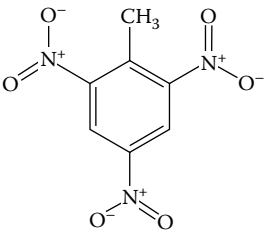

Figure A.182 TNT: secondary high explosive, main charge in many military munitions.

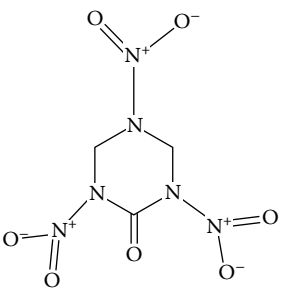

Figure A.183 TNTC: secondary high explosive.

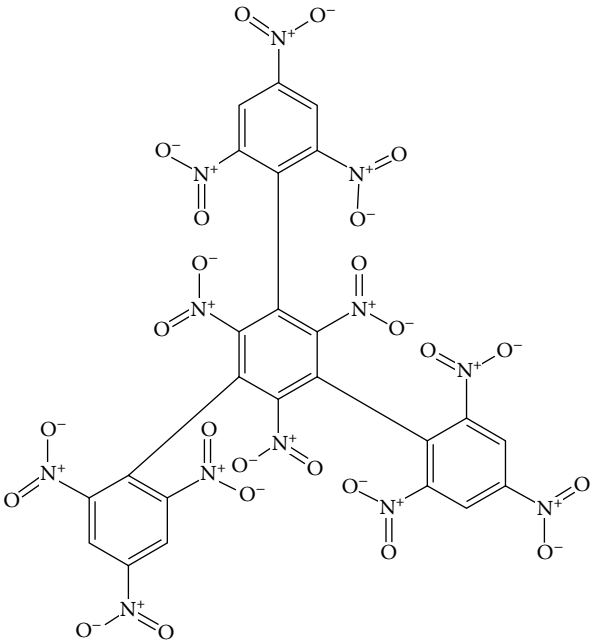

Figure A.184 TNTPB: secondary high explosive.

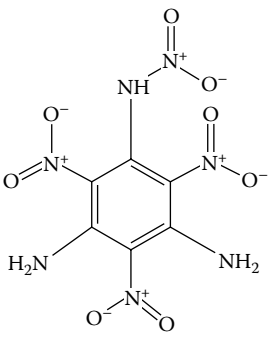

Figure A.185 UDTNB: secondary high explosive.

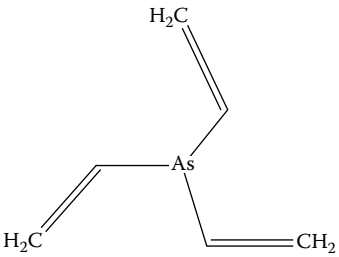

Figure A.186 Vinylarsine: violent irritant.

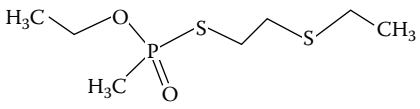

Figure A.187 Sub-VX: nerve agent.

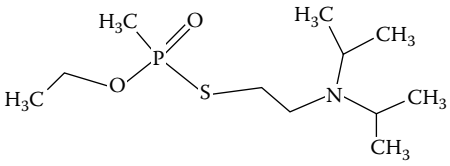

Figure A.188 VX: nerve agent.

Appendix B
Illustrations

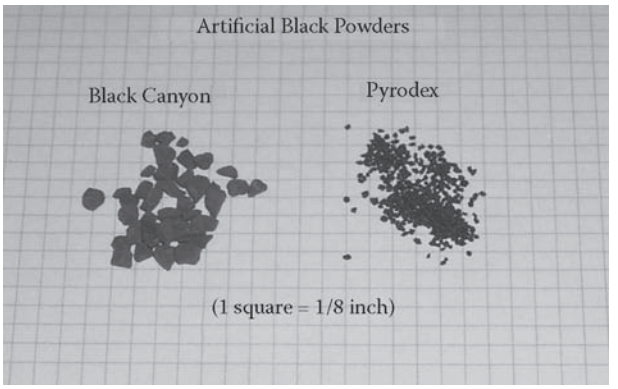

Figure B.1 Samples of artificial black powder.

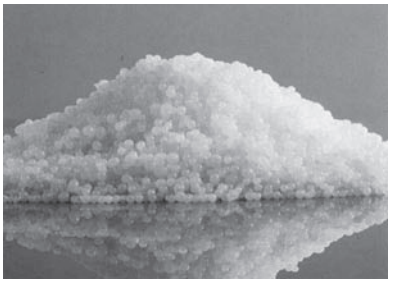

Figure B.2 Ammonium nitrate prills.

Figure B.3 Kinepak kinestik: binary explosive.

Figure B.4 Kinepak kinestik: binary explosive primed with det cord.

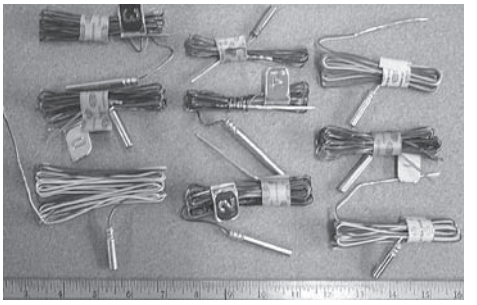

Figure B.5 Blasting caps.

Figure B.6 Cast boosters.

Figure B.7 Cast boosters.

Figure B.8 Cast boosters.

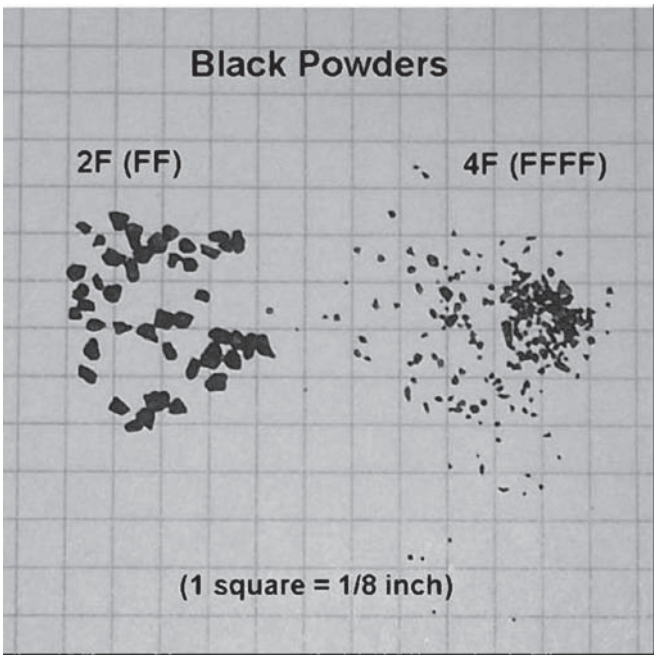

Figure B.9 Samples of GOEX black powder.

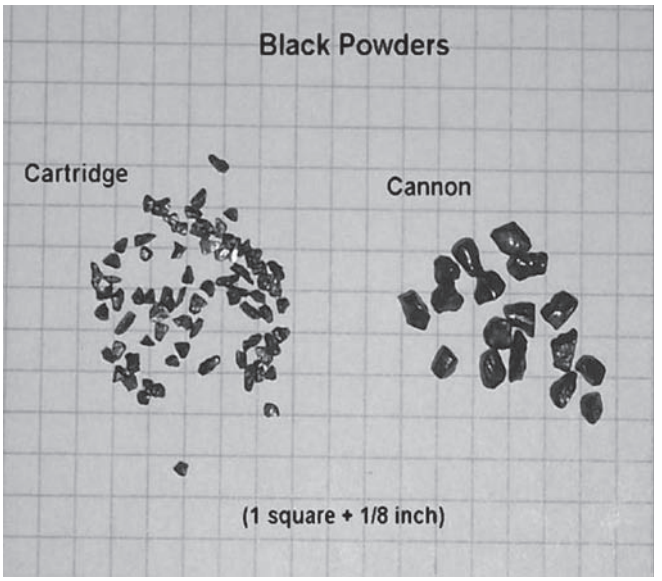

Figure B.10 Samples of GOEX black powder.

Figure B.11 Military plastic explosive.

Figure B.12 C4 plastic explosive.

Figure B.13 Cast booster.

Figure B.14 Deta-prime.

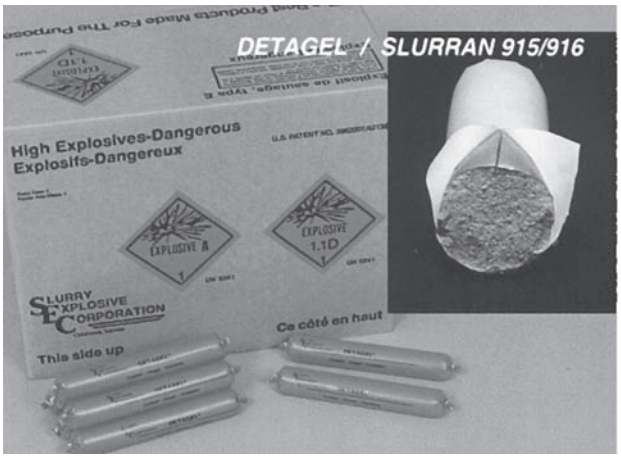

Figure B.15 Slurry explosive.

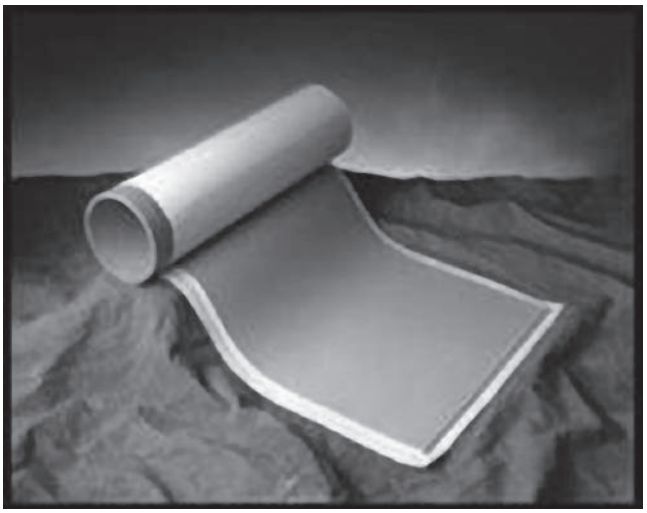

Figure B.16 Deta-sheet.

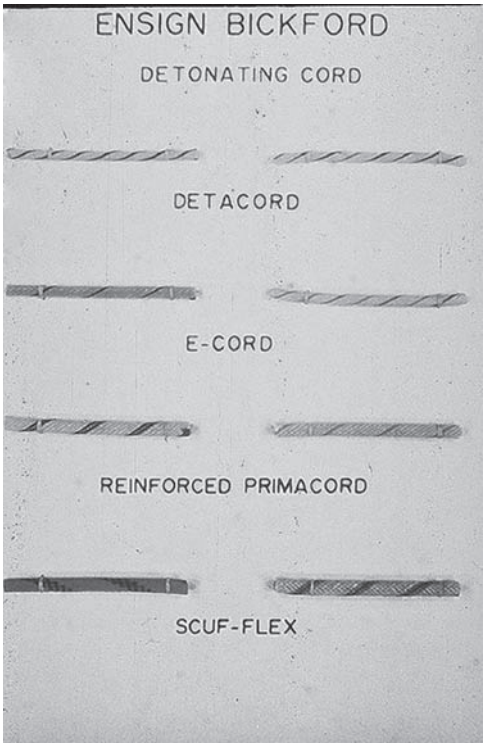

Figure B.17 Examples of det cord.

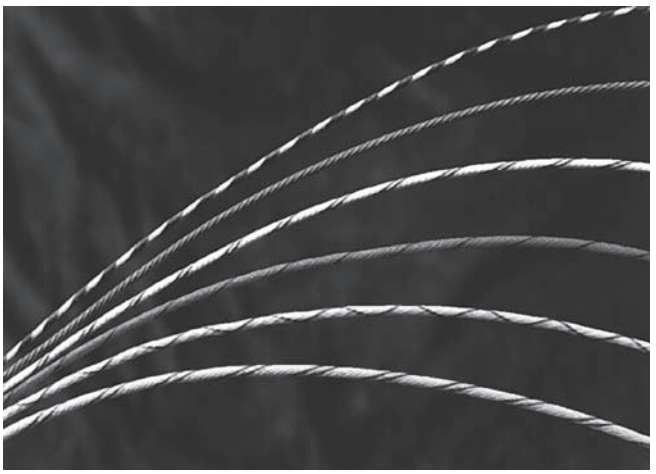

Figure B.18 Examples of det cord.

Figure B.19 Examples of det cord.

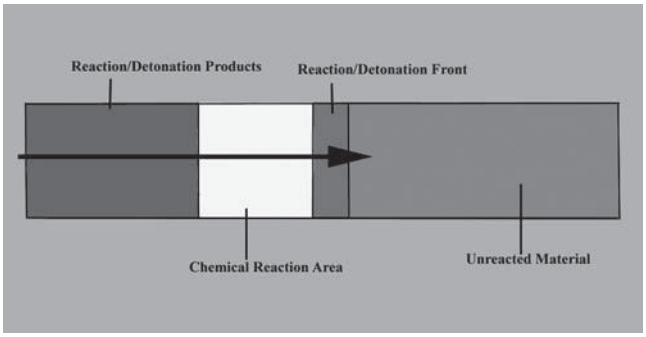

Figure B.20 Detonation reaction.

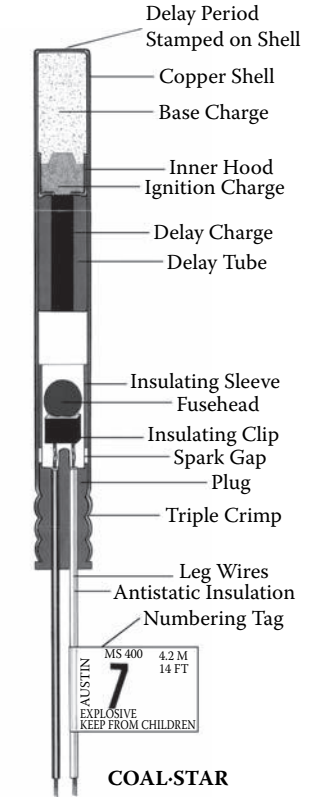

Figure B.21 Blasting cap delay.

Figure B.22 Dynamite.

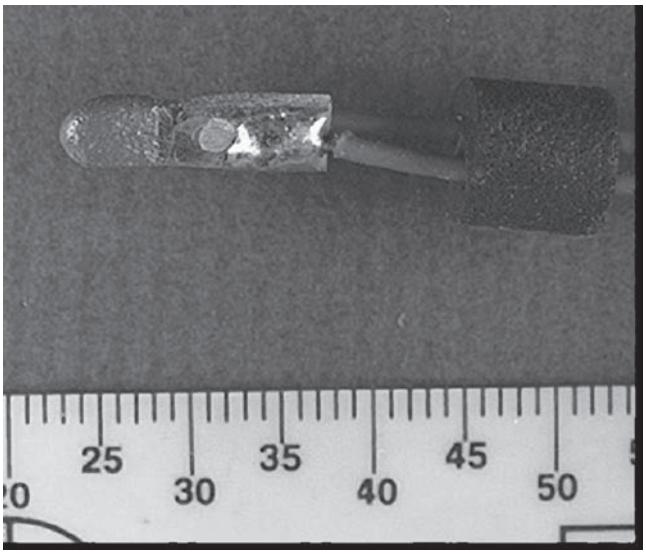

Figure B.23 Electric match.

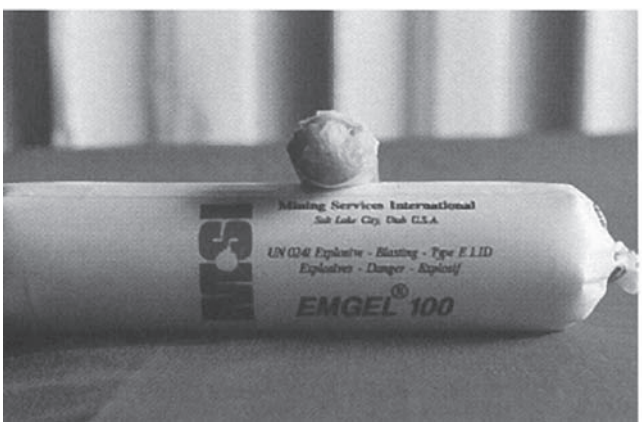

Figure B.24 Gelatin explosive.

Figure B.25 Gelatin explosive.

Figure B.26 Deta-sheet.

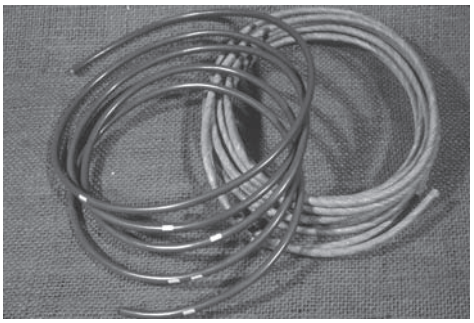

Figure B.27 Dynamite fuse.

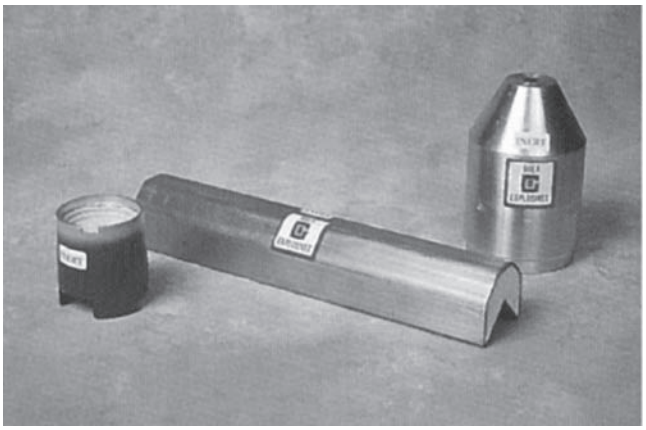

Figure B.28 Shaped charges.

Figure B.29 Explosive booby trap.

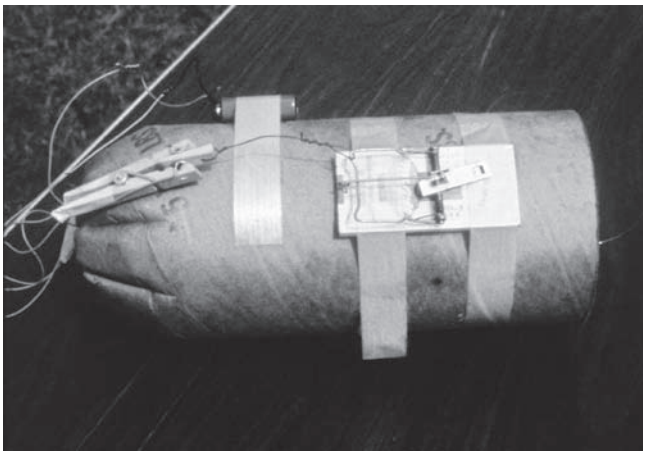

Figure B.30 Explosive booby trap.

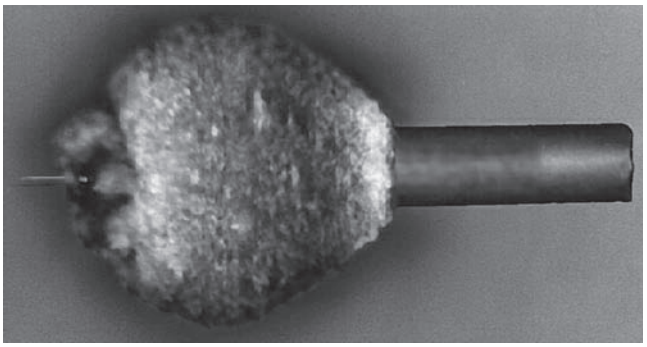

Figure B.31 High speed photo of a stick of dynamite detonating.

Figure B.32 Military dynamite.

Figure B.33 Military TNT.

Figure B.34 Effects of mustard agent.

Figure B.35 Effects of mustard agent.

Figure B.36 Sack of ammonium nitrate fuel oil (ANFO).

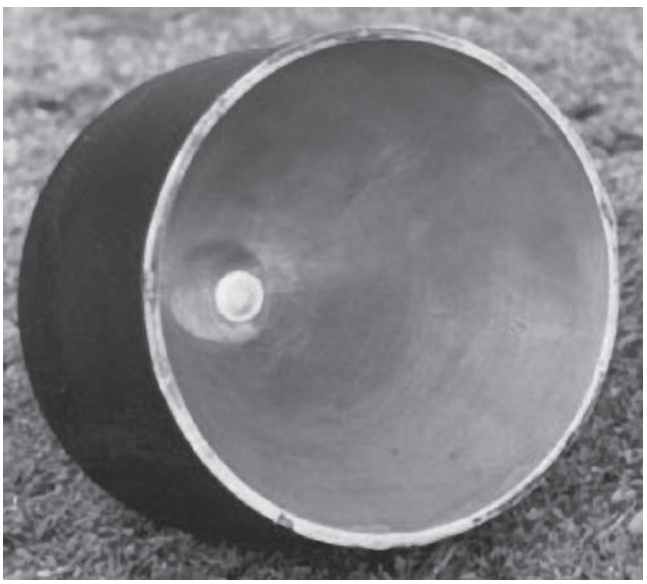

Figure B.37 Example of shaped charge.

Figure B.38 Example of shaped charge.

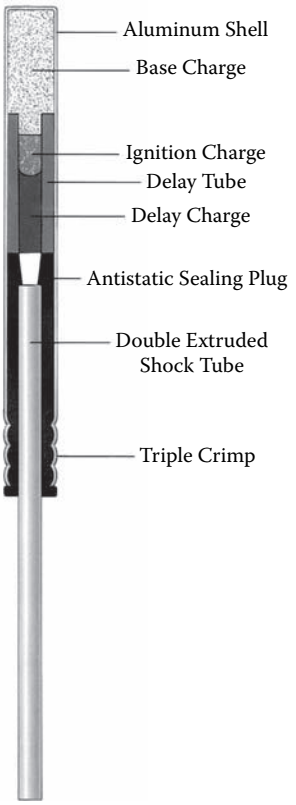

Figure B.39 Shock tube blasting cap.

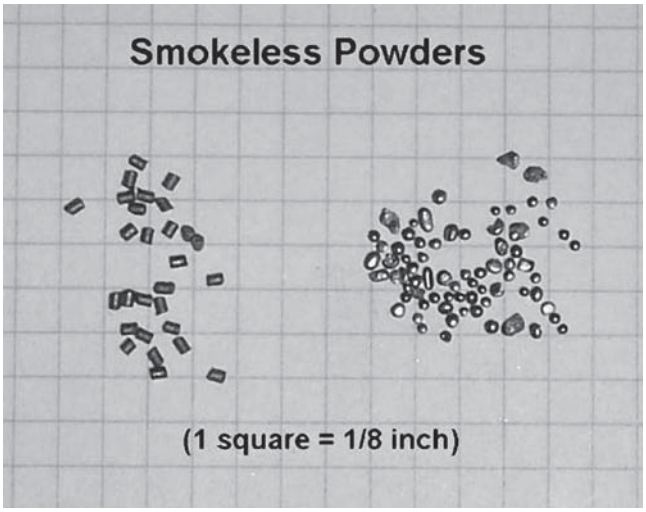

Figure B.40 Samples of smokeless powder.

Figure B.41 Military explosives.

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