SAFETY DATA SHEET

Issuing Date 14-Jan-2016 **Revision Date** 14-Jan-2016 **Revision Number** 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name 7227 BLACK

Other means of identification

Product Code(s) 8056590

UN-No

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use Printing ink.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

Markem-Imaje
150 Congress St. PO Box 2100
Keene, NH 03431
(603) 352-1130

MARKEM-IMAJE USA
100 Chastain Center Blvd
Suite 165

Kennesaw, GA 30144 - USA
Phone: 770-421-7700
Fax: 770-421-7702

Emergency telephone number

Chemical Emergency Phone Number Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

Emergency Telephone Number In case of emergency call CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Flammable liquids	Category 4

GHS Label elements, including precautionary statements

Emergency Overview

Danger

Hazard statements
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
May cause genetic defects
May cause cancer

Combustible liquid

Color Black **Physical State** Liquid **Odor** Solvent

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see .? on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
No information available

Other information
- May be harmful if swallowed
- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Nature of the Preparation Mixture of solvents, polymers, colorants and additives.

Chemical Name	CAS-No	Weight %

Carbon black	1333-86-4	10 - 20
Tributyl phosphate	126-73-8	10 - 20
n-Butyl alcohol	71-36-3	5 - 10
Hydrohexaphthalic anhydride	85-42-7	1 - 5
Formaldehyde	50-00-0	< 1
Cobalt 2-Ethylhexanoate	136-52-7	< 1

4. FIRST AID MEASURES

First aid measures

General Advice If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Eye Contact Immediately flush with plenty of water. Keep eye wide open while rinsing. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Consult a physician if necessary. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Wash off immediately with soap and plenty of water. Immediate medical attention is not required. If skin irritation persists, call a physician.

Inhalation Move to fresh air. Consult a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.

Ingestion Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

Protection of First-aiders Use personal protective equipment.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Alcohol-resistant foam. Water spray. Use:. Carbon dioxide (CO_2).

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical Non-combustible but may burn if exposed to flame or other ignition source. Burning produces obnoxious and toxic fumes. Runoff may pollute waterways. Fire or intense heat may cause violent rupture of packages. This material creates a fire hazard because it floats on water. Keep product and empty container away from heat and sources of ignition. Risk of ignition. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact.

Protective Equipment and Precautions for Firefighters Wear self-contained breathing apparatus and protective suit. Fire or intense heat may cause violent rupture of packages. Keep containers and surroundings cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Pay attention to flashback. Take precautionary measures against static discharges.

Environmental precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Beware of vapors accumulating to form explosive concentrations.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so

Methods for Cleaning Up Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat, sparks and open flame. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat and sources of ignition. Keep in properly labeled containers. Keep away from heat.

Incompatible Products Incompatible with oxidizing agents. Incompatible with strong acids and bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tributyl phosphate 126-73-8	TWA: 5 mg/m^3 inhalable fraction and vapor	TWA: 5 mg/m^3 (vacated) TWA: 0.2 ppm (vacated) TWA: 2.5 mg/m^3	IDLH: 30 ppm TWA: 0.2 ppm TWA: 2.5 mg/m^3
Carbon black 1333-86-4	TWA: 3 mg/m^3 inhalable fraction	TWA: 3.5 mg/m^3 (vacated) TWA: 3.5 mg/m^3	IDLH: 1750 mg/m^3 TWA: 3.5 mg/m^3 TWA: 0.1 mg/m^3 Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Formaldehyde 50-00-0	Ceiling: 0.3 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm unless specified in 1910.1048 (vacated) STEL: 10 ppm 30 min unless specified in 1910.1048 (vacated) Ceiling: 5 ppm unless specified in 1910.1048 STEL: 2 ppm see 29 CFR 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm
n-Butyl alcohol 71-36-3	TWA: 20 ppm	TWA: 100 ppm TWA: 300 mg/m^3 (vacated) S* (vacated) Ceiling: 50 ppm (vacated) Ceiling: 150 mg/m^3	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m^3

NIOSH IDLH: Immediately Dangerous to Life or Health.
S: Skin Notation*

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v.

Engineering Measures In case of insufficient ventilation wear suitable respiratory equipment. Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and Body Protection Long sleeved clothing. Apron. Chemical resistant apron. Antistatic boots. Impervious gloves. Lightweight protective clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn

Hygiene Measures Keep away from food and drink. Wash contaminated clothing before re-use. It is good practice in industrial hygiene to avoid contact with solvents by using appropriate protective measures whenever possible. When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.


Glasses


Gloves


Boots


Face Mask

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Color	Black .	**Odor**	Solvent.
Physical State	Liquid	**pH**	NA
Flash Point	> 199°F / > 93°C	**Boiling Point/Range**	249°C / 480°F
Autoignition Temperature	260°C / 500°F	**Melting Point/Range**	Not determined
Flammability Limits in Air		**Explosion Limits**	Not determined
Upper	36.0		
Lower	6.0%		
Specific Gravity	1.15	**Solubility**	Not determined
Evaporation Rate	Not determined	**Vapor Pressure**	Not determined
Vapor Density	Not determined	**Liquid Density**	11.21
VOC Content(%)	6.2807	**VOC (lb/gal)**	6.1387246874
VOC (g/l)	735.58144563		

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under normal conditions.

Possibility of Hazardous Reactions
Hazardous polymerization does not occur.

Conditions to avoid
Keep away from open flames, hot surfaces and sources of ignition. Heat, flames and sparks.

Incompatible materials
Incompatible with oxidizing agents. Incompatible with strong acids and bases.

Hazardous Decomposition Products
Carbon dioxide (CO2). Carbon monoxide. Cobalt.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known information

Inhalation There is no data available for this product

Eye Contact There is no data available for this product

Skin Contact There is no data available for this product

Ingestion There is no data available for this product

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tributyl phosphate 126-73-8	= 1390 mg/kg (Rat)	> 3100 mg/kg (Rabbit)	= 1.359 mg/L (Rat) 4 h = 28 g/m^3 (Rat) 1 h
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
Cobalt neodecanoate 27253-31-2	-	2500	-
Formaldehyde 50-00-0	= 600 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h
Cobalt naphthenate 61789-51-3	= 3900 mg/kg (Rat)	-	-
n-Butyl alcohol 71-36-3	= 700 mg/kg (Rat) = 790 mg/kg (Rat)	= 3400 mg/kg (Rabbit) = 3402 mg/kg (Rabbit)	> 8000 ppm (Rat) 4 h

Information on toxicological effects

Symptoms No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available
Mutagenic Effects No information available
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
Tributyl phosphate 126-73-8	A3	No information available	-	-
Carbon black 1333-86-4	A3	Group 2B	-	X
Cobalt neodecanoate 27253-31-2	-	Group 2B(as Cobalt compounds)	-	X(as Cobalt compounds)
Formaldehyde 50-00-0	A2	Group 1	Known	X
Cobalt naphthenate 61789-51-3	-	Group 2B	-	X
n-Butyl alcohol 71-36-3	-	No information available	-	-

ACGIH: (American Conference of Governmental Industrial Hygienists)
No information available
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC: (International Agency for Research on Cancer)
No information available
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP: (National Toxicity Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
Known - Known Carcinogen
OSHA: (Occupational Safety & Health Administration)
X - Present

At the time of printing of this MSDS, available epidemiologic, toxicological and mechanistic data on Carbon Black, does not support an increased risk of cancer in exposed humans.

Reproductive Toxicity	No information available
Specific target organ systemic toxicity (single exposure)	No information available
Specific target organ systemic toxicity (repeated exposure)	No information available
Chronic Toxicity	May cause adverse liver effects. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.
Target Organ Effects	Eyes, Skin, Respiratory system , Liver, Central nervous system (CNS), Bladder, Lymphatic System, Respiratory system.
Aspiration hazard	No information available

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	2186 mg/kg
ATEmix (dermal)	5150 mg/kg
ATEmix (inhalation-gas)	99999
ATEmix (inhalation-dust/mist)	84.3 mg/L
ATEmix (inhalation-vapor)	99999

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Carbon black 1333-86-4	.?	-		5600: 24 h Daphnia magna mg/L EC50
Tributyl phosphate 126-73-8	1.1: 72 h Desmodesmus subspicatus mg/L EC50 4.4: 96 h Pseudokirchneriella subcapitata mg/L EC50	1.0 - 10.0: 96 h Pimephales promelas mg/L LC50 static 7.66 - 8.74: 96 h Pimephales promelas mg/L LC50 flow-through 13: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 4.2: 96 h Oncorhynchus mykiss mg/L LC50 static 4.5: 96 h Oryzias latipes mg/L LC50 8.18: 96 h Pimephales promelas mg/L LC50 9.6: 96 h Oryzias latipes mg/L LC50 static		1.58 - 8.43: 48 h Daphnia magna mg/L EC50 Static

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
n-Butyl alcohol 71-36-3	500: 72 h Desmodesmus subspicatus mg/L EC50 500: 96 h Desmodesmus subspicatus mg/L EC50	100000 - 500000: 96 h Lepomis macrochirus µg/L LC50 static 1730 - 1910: 96 h Pimephales promelas mg/L LC50 static 1740: 96 h Pimephales promelas mg/L LC50 flow-through 1910000: 96 h Pimephales promelas µg/L LC50 static		1897 - 2072: 48 h Daphnia magna mg/L EC50 Static 1983: 48 h Daphnia magna mg/L EC50
Hydrohexaphthalic anhydride 85-42-7	95.6: 72 h Desmodesmus subspicatus mg/L EC50	660: 48 h Leuciscus idus mg/L LC50 static		103: 24 h Daphnia magna mg/L EC50
Formaldehyde 50-00-0	.?	0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through 100 - 136: 96 h Oncorhynchus mykiss mg/L LC50 static 22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 1510: 96 h Lepomis macrochirus µg/L LC50 static 41: 96 h Brachydanio rerio mg/L LC50 static		11.3 - 18: 48 h Daphnia magna mg/L EC50 Static 2: 48 h Daphnia magna mg/L LC50
Cobalt 2-Ethylhexanoate 136-52-7	.?	-		-

Persistence and Degradability
No information available

Bioaccumulation
No information available

Chemical Name	Log Pow
Carbon black 1333-86-4	None known
Tributyl phosphate 126-73-8	2.5
n-Butyl alcohol 71-36-3	0.785
Hydrohexaphthalic anhydride 85-42-7	0.56
Formaldehyde 50-00-0	0.35
Cobalt 2-Ethylhexanoate 136-52-7	None known

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

14. TRANSPORT INFORMATION

UN-No

Hazard Class

Packing Group

IATA Not regulated

UN-No UN3082

Hazard Class

Packing Group III

IMDG/IMO Not regulated

ADR Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Formaldehyde	50-00-0	0.279223	0.1
n-Butyl alcohol	71-36-3	5.58445	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde	100 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
n-Butyl alcohol	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Formaldehyde	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Carbon black	1333-86-4	Carcinogen
Formaldehyde	50-00-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	Pennsylvania	Illinois	Rhode Island
Carbon black	X	X	X	
Tributyl phosphate	X	X	X	
n-Butyl alcohol	X	X		
Formaldehyde	X	X	X	
Cobalt 2-Ethylhexanoate		X	X	

Chemical Name	New Jersey
Triethylene glycol, monomethyl ether	X(as Glycol ethers)
Tributyl phosphate	X
Carbon black	X
Cobalt neodecanoate	X(as Cobalt compounds)
Formaldehyde	X
Cobalt naphthenate	X
n-Butyl alcohol	X
Isobutyl alcohol	X

International Regulations

Mexico - Grade Slight risk, Grade 1

Chemical Name	Carcinogen Status	Exposure Limits
Carbon black		Mexico: TWA 3.5 mg/m^3 Mexico: STEL 7 mg/m^3
Tributyl phosphate		Mexico: TWA 0.2 ppm Mexico: TWA 2.5 mg/m^3 Mexico: STEL 0.4 ppm Mexico: STEL 5 mg/m^3
n-Butyl alcohol		Mexico: Ceiling 50 ppm Mexico: Ceiling 150 mg/m^3
Formaldehyde	A2	Mexico: Ceiling 2 ppm Mexico: Ceiling 3 mg/m^3

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

NFPA	**Health Hazard** 2	**Flammability** 2	**Reactivity** -
HMIS	**Health Hazard** 2	**Flammability** 2	**Reactivity** 0

Personal Protection X

Prepared By

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Keene, NH 03431
(603) 352-1130

Issuing Date 14-Jan-2016
Revision Note No information available

General Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication

End of Safety Data Sheet