



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER RELEASE AGENT

IDENTIFICATION NUMBER: 20-8185-002, 20-8185-008, 20-8185-016, 20-8185-032

PRODUCT USE/CLASS: Release Agent

SUPPLIER:

BUEHLER, a division of Illinois Tool Works Inc.

41 WAUKEGAN ROAD

LAKE BLUFF, IL 60044

EMERGENCY: 800-424-9300

INFORMATION: 847-295-6500

PREPARER: Technical Department, 847-295-6500

PREPARE DATE: 4/06/2012, 06 April 2012

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	2,2,4-trimethylpentane	540-84-1	50 - 100%

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Flammable liquid and vapor. Harmful if inhaled or swallowed. Causes skin and eye irritation. Vapors irritating to the eyes and respiratory tract. Toxic to aquatic organisms.

ACUTE EFFECTS – EYE CONTACT: Causes eye irritation. Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

ACUTE EFFECTS - SKIN CONTACT: Moderate irritant. Prolonged contact may cause dermatitis. May be absorbed through skin in harmful amounts.

ACUTE EFFECTS – INHALATION: Inhalation of vapors may cause irritation and drying of the nose, mucous membranes, and sore throat. Liquid particles breathed into the lungs may cause injury to the lungs, liver, or kidneys.

ACUTE EFFECTS - INGESTION: This material may be harmful or fatal if swallowed. May cause nausea and vomiting.

CHRONIC OVEREXPOSURE EFFECTS: *Animal studies suggest that repeated or extreme overexposure to 2,2,4-trimethylpentane may cause kidney damage.

OTHER INFORMATION: No information.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Skin Absorption

SECTION 4 – FIRST AID MEASURES

EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists.

SKIN CONTACT: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

INHALATION: If symptoms occur, remove to fresh air. Medical personnel may administer oxygen if breathing is difficult. Seek medical attention if symptoms persist.

INGESTION: Immediately call a POISON CENTER or doctor/ physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: Treat symptomatically. If swallowed, gastric lavage is indicated.

SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT: 22 F (SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: 1.1%

UPPER EXPLOSIVE LIMIT: 6.0%

AUTOIGNITION TEMPERATURE: 750 deg F

EXTINGUISHING MEDIA: ALCOHOL FOAM, CO2, DRY CHEMICAL, FOAM, WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Use NIOSH-approved self-contained breathing apparatus and full protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame. Application of large quantities (flooding) of water instead of mist or spray preferred.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Mark area and keep unnecessary personal away from spill area. Use non-sparking tools. Dike or contain spill. Absorb with inert material, such as clay. Sweep or shovel into loosely-covered waste container and remove to appropriate waste area. Dispose of in accordance with federal, state and local regulations. Wash spill area with detergent solution. Dispose of all washings and contaminated items in accordance with waste regulations

SMALL SPILL – Wear butyl rubber or nitrile gloves. LARGE SPILL – Wear gloves, boot covers, synthetic apron, and goggles.

ENVIRONMENTAL PRECAUTIONS: Prevent entry into drains and/or waterways. Keep off of soil.

SECTION 7 – HANDLING AND STORAGE

HANDLING: Use only with good general ventilation. Keep away from heat and extinguish all open flames and pilot lights. Use explosion-proof equipment for large-quantity processing. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. DO NOT reuse empty container without commercial clean or recondition. FOR INDUSTRIAL USE ONLY.

STORAGE: Store indoors in a cool dry place under ambient conditions away from heat and direct sunlight. Keep container closed and upright when not in use. Ground containers of 5 gallons or larger.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust as needed to control vapor or dust levels to below lowest component safe exposure limit. Explosion-proof ventilation required for processing large quantities.

RESPIRATORY PROTECTION: If TLV/PEL is exceeded, if use is performed in a poorly-ventilated space, or if inhalation effects occur, use approved organic vapor cartridge respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.

SKIN PROTECTION: Butyl rubber gloves. Nitrile gloves. Supported PVA gloves.

EYE PROTECTION: Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use.

OTHER PROTECTIVE EQUIPMENT: Eye wash and safety shower.

HYGIENIC PRACTICES: Follow good general industrial safety practices during use. Do not smoke or eat during use.

DO NOT reuse empty containers without commercial clean or recondition.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE:	205 - 255 F	VAPOR DENSITY:	Is heavier than air
ODOR:	Solvent	ODOR THRESHOLD:	No data
APPEARANCE:	Clear	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H ₂ O:	Insoluble		
FREEZE POINT:	No data	SPECIFIC GRAVITY:	.720
VAPOR PRESSURE:	63mmHg@20degC	pH @ 0.0%:	N.A.
PHYSICAL STATE:	Liquid	VISCOSITY:	Low
COEFFICIENT OF WATER/OIL DISTRIBUTION:	No data		

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 10 – STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Prolonged exposure to heat may cause solidification

INCOMPATIBILITY: Strong Lewis or mineral acids. Strong bases or oxidants.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon. Formaldehyde in oxygen-deficient environments.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 – TOXICOLOGICAL PROPERTIES

CHEMICAL NAME -----TEST DATA

2,2,4-trimethylpentane.....LD50-Oral-rat=1000 mg/kg

.....LC50-Inh-rat-1Hr=6156 ppm

SECTION 12 – ECOLOGICAL INFORMATION

CHEMICAL NAME TEST DATA

2,2,4-trimethylpentane No Information

BIOACCUMULATION POTENTIAL: No information indicating bioaccumulation.

PERSISTENCE AND DEGRADABILITY: No information indicating persistence or degradability.

AQUATIC TOXICITY: H410 Very toxic to aquatic life with long lasting effects.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal for appropriate disposal procedures. Product "as sold" is regulated as a hazardous waste under federal RCRA regulations (D001). DO NOT landfill free liquid. Fuels blending or incineration of free liquid recommended if permitted. .

SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Octane Solution

DOT TECHNICAL NAME: N.A.

HAZARD SUBCLASS: 3

DOT HAZARD CLASS: 3

PACKAGING GROUP: II

DOT UN/NA CLASS: UN1262

RESP. GUIDE PAGE: 128

INTERNATIONAL SHIPPING NAME: Octane Solution

INTERNATIONAL ID NUMBER: UN1262

IMDG CLASS (1°, 2°): None

IMDG PAGE NUMBER: II

IMDG EMS: N.D.

IATA CLASS (1°, 2°): 3, none

SECTION 15 – REGULATORY INFORMATION

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

CERCLA – SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED, AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: IMMEDIATE HEALTH HAZARD FIRE HAZARD DELAYED HEALTH HAZARD

SARA SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 AND 40 CFR PART 372:

CHEMICAL NAME -----CAS NUMBER

No SARA Section 313 components exist in this product.

TOXIC SUBSTANCE CONTROL ACT: THE CHEMICAL SUBSTANCES IN THIS PRODUCT ARE ON THE TSCA SECTION 8 INVENTORY. THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:

CHEMICAL NAME -----CAS NUMBER

2,2,4-trimethylpentane.....540-84-1

NEW JERSEY RIGHT-TO-KNOW: THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP 5 COMPONENTS IN THIS PRODUCT:

CHEMICAL NAME -----CAS NUMBER

2,2,4-trimethylpentane.....540-84-1

PENNSYLVANIA RIGHT-TO-KNOW: THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%:

CHEMICAL NAME -----CAS NUMBER

2,2,4-trimethylpentane.....540-84-1

CALIFORNIA PROPOSITION 65: No Proposition 65 chemicals known to exist in this product.

CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS: D2B, B2

COMPONENT RCRA CLASSIFICATIONS: Ignitable.

COMPONENT RCRA CODES: D001

CERCLA RQ VALUE (MINIMUM): 100 lbs as waste

SECTION 16 – OTHER INFORMATION

HMIS RATINGS

HEALTH: 2

FLAMMABILITY: 3

REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 3/23/2009, 23 March 2009

REASON FOR REVISION: Administrative change for new format. Revised section(s): 2, 5, 6, 7, 8, 11, 12, 14, 15, 16

VOLATILE ORGANIC COMPOUNDS: 6 grams/ltr (calculated)

LEGEND:

N.A. – NO INFORMATION

N.E. – NOT ESTABLISHED

N.D. – NOT DETERMINED

ABBREVIATIONS: ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS; OSHA = OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION; TLV-TWA = THRESHOLD LIMIT VALUE – TIME WEIGHTED AVERAGE (8 HOURS); STEL = SHORT-TERM EXPOSURE LIMIT (15 MINUTES); C = CEILING VALUE; PEL = PERMISSIBLE EXPOSURE LIMIT

DISCLAIMER: TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED IN THIS MSDS IS ACCURATE OR IS OBTAINED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, NO LIABILITY, EXPRESSED OR IMPLIED, IS ASSUMED FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. BUYER ASSUMES LIABILITY IN ITS USE OF THE MATERIAL.