

Material Safety Data Sheet



TRIAGEN

Industrial Metal Parts Cleaner

Rev. 01/25/2000

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Section I: Product Identification

Product name: TRIAGEN Industrial Metal Parts Cleaner
Synonym: Alkyl Bromide
Molecular Formula: See Section II

The "Plain English" Section

Material Safety Data Sheets can be confusing. Federal law requires us to print a great deal of technical information, which probably won't help the non-scientist. ECOLINK includes this "PLAIN ENGLISH" section, written to address the questions and concerns of the average person. If you have additional health, safety or product questions, don't hesitate to call us at 800/886-8240.

Health Hazards: TRIAGEN is an industrial chemical. We call it "environmentally preferred" because it is intended to replace products that are more hazardous, (1,1,1 trichloroethane, mineral spirits, MEK, etc.). This does not mean that it is completely harmless. It is strong enough to remove tough industrial soils, so it can irritate your skin. We suggest you wear gloves, and avoid extended exposure to unprotected skin. Don't get it in your eyes, or breath large amounts of the vapor, (it will dry out your nasal passages). Used on a rag or from a spray bottle, the product won't produce fumes in any great quantity, (don't spray this material under high pressure without adequate ventilation). For more exposure and first aid information, please read through this MSDS.

Flashpoint: TRIAGEN does not have a flashpoint. Under virtually all industrial circumstances and conditions, this material will not burn, (under exactly the right conditions, it can be made to ignite). Combustion in ordinary use isn't a big concern but if you want to discuss a specific application, please call us. We do not recommend using this, or any other industrial solvent, around welding or hot work areas.

Disposal: TRIAGEN is a halogenated solvent. Liquid waste that is captured after the cleaning process must be disposed of according to certain specific guidelines. Additionally, once this material is contaminated with whatever you are cleaning, the resulting mixture may fall under a hazardous classification, depending on whether or not the material you are cleaning is hazardous. If you aren't sure how to dispose of this material, give us a call and we will help you make the right decisions.

Section II: Chemical or Hazardous Components

Chemical Name	n - Propyl Bromide
CAS No.	106 - 94 - 5
Approx. wt. %	95%
Exposure	ACGIH-TLV – Not Established OSHA-PEL – Not Established MREL – 100 ppm 8 hr. TWA (Manufacturer's recommended exposure limit)

Chemical Name	1,2 - Butylene Oxide
CAS No.	106 - 88 - 7
Approx. wt. %	< 1 %
Exposure	ACGIH-TLV-TWA – Not Established OSHA-PEL-TWA – Not Established

Chemical Name	Dimethoxymethane
CAS No.	109-87-5
Approx. wt. %	< 3%
Exposure	Y (Hazardous) ACGIH-TLV-TWA – 1000 ppr OSHA-PEL-TWA – 1000 ppr

Chemical Name	T - Butanol
CAS No.	75650
Approx. wt. %	< 1%
Exposure	Y (Hazardous) ACGIH-TLV-TWA – 100 ppm OSHA-PEL-TWA – 100 ppm

1,2-Butylene Oxide and T-Butanol are subject to the reporting requirements of Section 313.
1,3 Butylene Oxide is a CERCLA regulated material, RQ 100 lbs.

RCRA REGULATED:	No
CERCLA (superfund):	No
ALL MATERIALS IN PRODUCT ARE TSCA LISTED	
DOT regulated:	No
DOT haz. class:	Orm-D
DOT Shipping Name:	Consumer Commodity
DOT number:	Not Listed

Section III: Physical Data

Appearance & Odor:	Clear, colorless liquid with characteristic odor
Boiling Point:	160°F. @ 760 mmhg
Evaporation Rate:	6.05
Melting Point:	Not Applicable
Solubility In Water:	Negligible
Specific Gravity (H ₂ O=1):	1.33
VOC Content:	1322 gm/l
Vapor Density (AIR=1):	4.25
Vapor Pressure (psia.):	111 mm hg @ 20°C

Section IV: Fire and Explosion Hazard Data

Flash Point (Method):	
Bulk Liquid (TCC)	None
Aerosol: (USA flame extension):	Non-Flammable

(A "non-flammable" designation indicates that the contents will not ignite and/or will extinguish a flame sprayed on or near an ignition source and the flame cannot "flash back" to the aerosol container.)

Flammable Limits:	
LEL:	3.8
UEL:	7.5

Extinguishing Media:
All conventional media are suitable.

Special Fire Fighting Procedures:
Keep fire exposed containers cool with water. Fire fighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate gear and chemical resistant personal protective equipment.

Unusual Fire & Explosion Hazards:
Material forms a flammable mixture with air in a narrow flammability range (~ 3.8% -7.5% by volume). Containers exposed to flame or high heat may explode. Use water to cool containers. In fire, toxic gases may be released.

Section V: Reactivity Data

Stability: Stable

Conditions to Avoid:
Sources of ignition such as sparks, hot spots, welding, flames and cigarettes. Ignition/flash may result if concentration of product is in the flammable range (See section IV for LEL and UEL values).

Incompatibility (materials to avoid) : Not compatible with certain plastics & rubber, strong oxidizers, strong acids. Test all non-metallics prior to use.

Hazardous Decomposition:
May form hydrogen bromide, bromine, and oxides of carbon.

Hazardous Polymerization:
Will Not Occur.

Section VI: Health Hazard Data

Primary Routes of Exposure:
Oral, Inhalation, and Skin

Ingestion:
Swallowing large amounts may be harmful, by causing gastrointestinal irritation.

Inhalation:
Breathing large amounts may be harmful, by causing nose, throat, respiratory tract irritation, and effecting the central nervous system causing drowsiness, dizziness and/or possible unconsciousness.

Eyes:
Liquid contact will irritate eyes and may cause stinging, tearing and redness.

Skin or Contact:
May cause mild irritation or redness and burning. Chemical burns are possible may aggravate pre-existing diseases of the skin and liver.

First Aid:

Ingestion:

Seek medical attention immediately. If individual is drowsy or unconscious, do not give anything by mouth; place individual on left side with head down. If conscious, give 1-2 glasses of water. Contact medical facility or poison control center for advice about whether to induce vomiting.

Inhalation:

Remove to fresh air, if breathing is difficult give oxygen; if breathing has stopped, perform artificial respiration. Keep person warm and quiet. Seek medical attention.

Eyes: Irrigate immediately with water for at least 15 minutes. Get medical attention if irritation persists.

Skin: Wash with soap and water. Thoroughly clean contaminated clothing and shoes before reuse. If symptoms persist, seek medical attention.

Carcinogen: NTP – Not Listed
IARC Monographs – None
OSHA REGS – Not Regulated

(The minor ingredient, 1,2-Butylene Oxide is classified by IARC as a group 3 material which exhibits limited evidence of carcinogenicity in experimental animals and no human data.).

Section VII: Precautions for Safe Handling

HMIS Information:
Health – 2 / Reactivity – 0
Flammability – 1 Personal Protection – B

HMIS Definition:
0 – Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Extreme
"/" in the Health Category denotes material does not target any major organs.

“*” in the Health Category denotes material may target certain organs.

Eye Protection:

Safety glasses and splash protection required.

Protective Gloves:

Vitron ® or Norfoil gloves are recommended. (Vitron gloves are manufactured by Norfoil gloves are manufactured by..... Nitrile and Butyl rubber gloves provide splash protection only.

Respiratory Protection:

Not required under conditions of normal use. If vapor/mist is present use NIOSH certified organic vapor mask.

Ventilation:

Local exhaust hood or fan may be used; adequate ventilation is extremely important.

Other Protective Clothing:

None required under normal use.

Work Practices:

Proper ventilation is required, avoid breathing concentrated vapors/fumes. All equipment should be properly grounded. Treat this chemical with respect and follow all MSDS instructions.

Section VIII: Control Measures

Small Spill: Absorb liquid on vermiculite, floor absorbent, or other inert absorbent. Place in suitable labeled container for disposal.

Large Spill: Ventilate contaminated area. Eliminate all ignition sources, (flares, flames including pilot lights, electrical sparks). **Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed.** Stop spill at source. Prevent from entering drains, sewers, streams, etc. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Transfer contaminated absorbent, soil and other materials to containers for disposal.

Waste Disposal Method: Triagen may be disposed of as an industrial waste in a manner acceptable to good waste management practices and in compliance with applicable local, state, and federal regulations.

Precautions To Be Taken In Handling & Storing: Material should be stored in a cool dry, well-ventilated area. Aerosol containers may explode when exposed to temperatures at or above 120°F. Since empty containers retain product residues, all hazard precautions given in the data sheet must be observed. All metal pails or drums should be grounded and/or bonded when material is transferred. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature may result in ignition.

Other Precautions: Keep this and all chemicals out of the reach of children.

Section IX: Part Number and Packaging

PART #	658
Unit Size	12 x 16 oz (10 oz fill) aerosol cans
NSN #	6850-01-450-6155

DISCLAIMER: Ecolink, Inc. believes the information contained herein is accurate. However, Ecolink makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained by the use thereof. Ecolink, Inc. assumes no responsibility for injury from the use of the product described herein.

END OF MSDS