

SAFETY DATA SHEET

LUBRICUT 4410

Section 1. Identification

GHS product identifier : LUBRICUT 4410
Other means of identification : Not available.
Product type : Liquid
Product code : 2691000000
SDS # : 1066

Relevant identified uses of the substance or mixture and uses advised against

Product use: For professional use only. Industrial applications: Metalworking fluids

Supplier's details : Lozier Oil Company
1 Sunny St.
Farmington, IL 61531
Tel: 309-245-4846
Fax: 309-245-4888

Emergency phone number : Chemtrec: 1-800-424-9300 (US & Canada)
+1 703-527-3887 (International)

Section 2. Hazard identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SERIOUS EYE DAMAGE – Category 1
SKIN SENSITIZATION – Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 15.5%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 15.5%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 15.5%

GHS Hazard Symbols :



Signal Word : Danger

Hazard Statements : Causes serious eye damage.

May cause an allergic skin reaction.

Precautionary Statements

Prevention

: Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Contaminated work clothing must not be allowed out of the workplace.

Response

: IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. 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 physician.

Storage

: Not applicable.

Disposal

: Dispose of content and container in accordance with local, regional, national and international regulations.

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

: Not available

Ingredient name	%	CAS number
1,1'-iminodipropan-2-ol	≤5	110-97-4
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	≤5	4719-04-4
1,1',1''-nitrilotripropan-2-ol	≤3	112-20-3
1-butylaminoethanol	<3	111-75-1
Oxirane, 2-methyl-,polymer with oxirane, monobuty ether, phosphate	<3	71662-44-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. Fire-aid measures

Description of necessary measures

Eye Contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove denture if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt, or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
Pain
Watering
Redness
Inhalation : No specific data
Skin contact : Adverse symptoms may include the following:
Pain or irritation
Redness
Blistering may occur
Ingestion : Adverse symptoms may include the following:
Stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments : No specific treatment
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
Carbon dioxide
Carbon monoxide
Nitrogen oxides
Phosphorous oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protect equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal cautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breath vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information for “non-emergency personnel”.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows: contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite, or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 or emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, keep tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupations hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, way from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container

tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient Name	Exposure limits
1,1'-iminodipropan-2-ol	None.
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	None.
1,1',1''-nitrilotripropan-2-ol	None.
2-butylaminoethanol	None.
Oxirane, 2-methyl-, polymer with oxirane, monobutyl ether, phosphate	None.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measure, such as personal protective equipment:

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking or using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face Protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggle and/or face shield. If inhalation hazards exist, a full-face respiratory may be required instead.

Skin Protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

- Body protection** : Personal protective equipment for body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid [Clear to slightly hazy liquid.]
Color	: Amber.
Odor	: Mild.
pH	: 9.6 to 10.3
Melting point	: -3.89°C (25°F)
Boiling point	: 100°C (212°F)
Flash point	: Closed cup: Not applicable [Product does not sustain combustion.]
Evaporation Rate	: Not available.
Flammability (solid, gas)	: Slightly flammable in the presence of the following materials or conditions: open flames, static discharge and heat.
Upper flammability or explosive limits	: Not available
Lower flammability or explosive limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Density	: 1.05 to 1.08 g/cm ³
Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available
Viscosity	: Kinematic (40°C (104°F)): 0.2102 cm ² /s (21.02 cSt)
VOC	: 51.9 g/L
VOC Method	: ASTM E 1868

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,1'-iminodipropan-2-ol	LD50 Oral	Rat	4765 mg/kg	-

2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	LD50 Oral	Rat	763 mg/kg	-
1,1',1''-nitrilotripropan-2-ol	LD50 Oral	Rat	4730 mg/kg	-
2-butylaminoethanol	LD50 Dermal	Rabbit	>2000.01 mg/kg	-
	LD50 Oral	Rat	1150 mg/kg	-

Conclusion/summary : No known significant effects or critical hazards

Irritation/Corrosion

Chemical Name	Result	Species	Score	Exposure	Observation
1,1'-iminodipropan-2-ol	Eyes – severe irritant	Rabbit	-	50 mg	-
	Skin – mild irritant	Rabbit	-	500 mg	-
1,1',1''-nitrilotripropan-2-ol	Eyes – Severe irritant	Rabbit	-	5 mg	-
2-butylaminoethanol	Skin – Severe irritant	Rabbit	-	-	-

Conclusion/summary

Skin : May cause slight transient irritation.
Eyes : Causes serious eye damage.
Respiratory : Repeated or prolonged exposure to spray or mist may product respiratory tract irritation.

Sensitization

Conclusion/summary

Skin : May cause an allergic skin reaction.
Respiratory : Sensitization not suspected for humans.

Mutagenicity

Conclusion/Summary

There are no data available on the mixture itself. Mutagenicity not suspected for humans.

Carcinogenicity

Conclusion/Summary

There are no data available on the mixture itself. Carcinogenicity not suspected for humans.

Reproductive Toxicity

Conclusion/Summary

There are no data available on the mixture itself. Not considered to be dangerous to humans.

Teratogenicity

Conclusion/Summary

There are no data available on the mixture itself. Teratogenicity not suspected for humans.

Specific target organ toxicity (single exposure)

Name	Category	Route of Exposure	Target Organs
2-butylaminoethanol	Category 3	Not applicable	Respiratory tract irritation.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.
Skin contact : May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
Pain
Watering
Redness

Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
Pain or irritation
Redness
Blistering may occur

Ingestion : Adverse symptoms may include the following:
Stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available
Potential delayed effects : Not available

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : No known significant effects or critical hazards.
General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE Value
Oral	12589 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	Acute EC 50 26.1 ppm Fresh water	Daphnia – Daphnia magna	48 hours
	Acute LC 50 39 ppm Fresh water	Fish – Leopmis macrochirus	96 hours

Conclusion/Summary : Toxic to aquatic life

Persistence and degradability

Conclusion/Summary : This product has not been tested for biodegradation. Expected to be biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
1,1'-iminodipropan-2-ol	-0.82	-	Low

2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	-2	-	Lo
1,1',1''-nitrotripropan-2-ol	-0.015	<0.57	low

Mobility in soil

Soil/water partition coefficient (Koc) : Not available

Other adverse effects : No known significant effects or critical hazards

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated	Not available	Not available	Not available	Not available	Not available
Un proper shipping name	-	Not available	Not available	Not available	Not available	Not available
Transport hazard class(es)	-	Not available.	Not available	Not available	Not available	Not available.
Packing group	-	-	-	-	-	-
Environmental hazard	No.	No.	No.	No.	No	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S Federal regulations : **TSCA 4(a) proposed test rules:** sodium 4(or 5)-methyl-1H benzotriazolide
TSCA 4(a) final test rules: bis(2-chloroethyl) ether
TSCA 8(a) PAIR: bis(2-chloroethyl) ether
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 12(b) one-time export: 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
Commerce control list precursor: 2,2',2''-nitrotriethanol
Clean Water Act (CWA) 307: bis(2-chloroethyl) ether, zinc chloride
Clean Water Act (CWA) 311: propylene oxides; zinc chloride; Sodium hydroxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed
Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List 1 (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Ethylene oxide; oxirane	<0.1	Yes.	-	-	-	-
Propylene oxide	≤0.1	Yes	10000	1444.3	100	14.4
Bis(2-chloroethyl) ether	<0.1	Yes	10000	981.5	10	0.98

SARA 304 RQ : 5050505.1 lbs / 292929.3 kg [568758.5 gal / 2152985.3 L]

SARA 311/312

Classification : SERIOUS EYE DAMAGE – Category 1
 SKIN SENSITIZATION – Category 1

Composition/information on ingredients

Name	%	Classification
1,1'-minodipropan-2-ol	≤5	EYE IRRITATION – Category 2A
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	≤5	ACUTE TOXICITY (oral) – Category 4 SKIN SENSITIZATION – Category 1
1,1',1''-nitriлотripropan-2-ol	≤3	EYE IRRITATION – Category 2A
2-butylaminoethanol	<3	ACUTE TOXICITY (oral) – Category 4 SKIN IRRITATION – Category 2 SERIOUS EYE DAMAGE – Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) – Category 3
Oxirane, 2-methyl-, polymer with oxirane, monobutyl ether, phosphate	<3	SERIOUS EYE DAMAGE – Category 1

SARA313

Component	Product name	CAS number	%
Form R – Reporting Requirements	No listed substance		
Supplier notification	No listed substance		

State regulations

Massachusetts : The following components are listed: TRISOPROPANOLAMINE; TRIETHANOLAMINE; DIISOPROPANOLAMINE
New York : None of the components are listed
New Jersey : The following components are listed: TRIETHANOLAMINE; ETHANOL, 2,2',2''-NITRILOTRIS-

Pennsylvania

: The following components are listed: 2-PROPANOL, 1,1',1"-NITRILOTRIS-; ETHANOL, 2,2',2"-NITRILOTRIS-; 2-PROPANOL, 1,1'-IMINOBIS-

California Prop. 65



WARNING: This product can expose you to chemicals including ethylene oxide; oxirane, which are known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including 1,4-Dioxane, Propylene oxide, Bis(2-chloroethyl)ether, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Ingredient name	Concentration (%)	No significant risk level ['-' (Dash Symbol) means no Safe Harbor level established]	Maximum acceptable dosage level ['-' (Dash Symbol) means no Safe Harbor level established]
1,4-Dioxane	0.002 – 0.00299	30 ug/day [No significant risk level]	-
Ethylene oxide	0.0004 – 0.00436	-	-
Propylene oxide	0 – 0.00396	-	-
Bis(2-chloroethyl)ether	0.00001	0.3 ug/day [No significant risk level]	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Name	List name	Status
Triethanolamine	Schedule III	Listed

Montreal Protocol (Annexes A,B,C,E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory List

Australia	: Not determined
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: At least one component is not listed.
New Zealand	: All components are listed or exempted.
Philippines	: At least one component is not listed.
Republic of Korea	: All components are listed or exempted.
Taiwan	: Not determined.
United States	: All components are listed or exempted.

Section 16. Other information

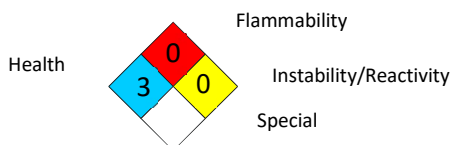
Hazardous Material Information System (U.S.A.)

Health	/	3
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
SERIOUS EYE DAMAGE – Category 1	Calculation method
SKIN SENSITIZATION – Category 1	Calculation method

History

Date of issue/Date of revision : 11/6/2019

Date of previous issue : 7/3/2018

Version : 2

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- : BCF = Bioconcentration Factor
- : GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- : IATA = International Air Transport Association
- : IBC = Intermediate Bulk Container
- : IMDG = International Maritime Dangerous Goods
- : LogPow = logarithm of the octanol/water partition coefficient
- : MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- : UN = United Nations Not available.

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.