

SAFETY DATA SHEET

LAC 147

Section 1. Identification

GHS product identifier : LAC 147

Other means of identification : Not available.

Product type : Liquid

Product code : 103000000

SDS # : 1009

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

Product use: For professional use only. : Industrial applications: Cleaner; Alkaline.

Supplier's details : Allied Oil & Supply, Inc.
 2209 S. 24th St.
 Omaha, NE 68108 U.S.A.
 Tel: 402-344-4343
 INFOTRAC

Emergency telephone number : U.S. and Canada - 800.535.5053
 Outside the U.S. and Canada - +1 352.323.3500

Section 2. Hazards 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 : SKIN IRRITATION - Category 2
 SERIOUS EYE DAMAGE - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 3.6%
 Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 3.6%
 Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 3.6%

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : Causes serious eye damage.
 Causes skin irritation.
 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Do not breathe vapor. Wash hands thoroughly after handling.

Section 2. Hazards identification

- Response** : Get medical attention if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation 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 contents and container in accordance with all 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
tetrasodium ethylene diamine tetraacetate	≤10	64-02-8
disodium metasilicate	≤3	6834-92-0
potassium hydroxide	≤3	1310-58-3

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. First aid measures

Description of necessary first aid 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. Flush contaminated skin with plenty of 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures 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. 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 a 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** : Causes skin irritation.
- 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

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Section 5. Fire-fighting measures

- 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
metal oxide/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 protective 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 precautions, 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 breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate 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 in "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 for 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). 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, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Advice on general occupational 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, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. 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
tetrasodium ethylene diamine tetraacetate disodium metasilicate potassium hydroxide	None. None. ACGIH TLV (United States, 3/2017). C: 2 mg/m ³ OSHA PEL 1989 (United States, 3/1989). CEIL: 2 mg/m ³ NIOSH REL (United States, 10/2016). TWA: 2 mg/m ³ 10 hours.

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 measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. 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 goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Section 8. Exposure controls/personal 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 the 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.]
- Color** : Yellow.
- Odor** : Mild.
- pH** : 2 to 13
- Melting point** : Not available.
- Boiling point** : 100°C (212°F)
- Flash point** : Closed cup: Not applicable. [Product does not sustain combustion.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Density** : 1.12 to 1.15 g/cm³
- Solubility** : Easily soluble in the following materials: cold water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- VOC** : 0 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** : The 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** : Reactive or incompatible with the following materials:
acids
- 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
tetrasodium ethylene diamine tetraacetate	LD50 Oral	Rat	10 g/kg	-
disodium metasilicate	LD50 Oral	Rat	1153 mg/kg	-
potassium hydroxide	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	273 mg/kg	-

- Conclusion/Summary** : There are no data available on the mixture itself. No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
disodium metasilicate	Skin - Moderate irritant	Guinea pig	-	24 hours 250 milligrams	-
	Skin - Severe irritant	Human	-	24 hours 250 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 250 milligrams	-
potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 milligrams	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Human	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 milligrams	-

Conclusion/Summary

- Skin** : Causes skin irritation.
- Eyes** : Corrosive to eyes.
- Respiratory** : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation. Pre-existing respiratory disorders may be aggravated by over-exposure to this product.

Sensitization

Section 11. Toxicological information

Product/ingredient name	Route of exposure	Species	Result
potassium hydroxide	Respiratory skin	Guinea pig Guinea pig	Not sensitizing Not sensitizing

Conclusion/Summary

Skin : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization: not suspected for humans.

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, according to our database.

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
disodium metasilicate	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
tetrasodium ethylene diamine tetraacetate	Category 2	Inhalation	Not determined

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 : Causes skin irritation.

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.

Section 11. Toxicological information

- 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** : Contains material that may cause target organ damage, based on animal data.
- General** : May cause damage to organs through prolonged or repeated exposure.
- 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
<input checked="" type="checkbox"/> Oral	5223.3 mg/kg
Dermal	90559.5 mg/kg
Inhalation (dusts and mists)	17.95 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Tetrasodium ethylene diamine tetraacetate	Acute LC50 486000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
disodium metasilicate	Acute EC50 33.53 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
potassium hydroxide	Acute LC50 2320 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute LC50 80 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

- Conclusion/Summary** : There are no data available on the mixture itself.

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

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
tetrasodium ethylene diamine tetraacetate	5.01	1.8	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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.

RCRA classification : D002

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	✓	✓	✓	✓	✓	✓
Transport hazard class(es)	✓	✓	✓	✓	✓	✓
Packing group	✓	✓	✓	✓	✓	✓
Environmental hazards	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 8(a) CDR Exempt/Partial exemption: Not determined
 Commerce control list precursor: 2,2',2"-nitrilotriethanol
 Clean Water Act (CWA) 311: Sodium hydroxide; potassium hydroxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN IRRITATION - Category 2
 SERIOUS EYE DAMAGE - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Composition/information on ingredients

Name	%	Classification
<input checked="" type="checkbox"/> tetrasodium ethylene diamine tetraacetate	≤10	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 2
disodium metasilicate	≤3	CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
potassium hydroxide	≤3	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	No listed substance		
Supplier notification	No listed substance		

State regulations

Section 15. Regulatory information

- Massachusetts** : The following components are listed: TRIETHANOLAMINE; POTASSIUM HYDROXIDE
- New York** : The following components are listed: Potassium hydroxide
- New Jersey** : The following components are listed: TRIETHANOLAMINE; ETHANOL, 2,2',2"-NITRILOTRIS-; POTASSIUM HYDROXIDE; CAUSTIC POTASH
- Pennsylvania** : The following components are listed: ETHANOL, 2,2',2"-NITRILOTRIS-; POTASSIUM HYDROXIDE

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient 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** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- 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

Section 16. Other information

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
SKIN IRRITATION - Category 2	Expert judgment
SERIOUS EYE DAMAGE - Category 1	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method

[History](#)

Date of issue/Date of revision : 9/3/2019

Date of previous issue : 7/12/2018

Version : 1.04

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

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.