

Special fire fighting procedures: Water spray should be used to cool containers.

Special protective equipment for fire-fighters: Firefighters should wear standard protective equipment and a positive pressure self-contained breathing apparatus (SCBA).

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with alkalis and caustic products. Eliminate all sources of ignition.

Methods and material for containment and cleaning up: Avoid contact with alkalis and caustic products. Use non-sparking tools. Absorb with sand or other inert absorbent. Scrape up and place in appropriate vented container.

Notification Procedures: Caution: Contaminated surfaces may be slippery. For waste disposal, see Section 13 of the SDS.

Environmental Precautions: Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. Mechanically ventilate the spillage area to prevent the formation of explosive concentrations.

7. Handling and storage

Precautions for safe handling: Provide sufficient ventilation during operations which cause vapor formation. Do not mix with incompatible materials. For further information, refer to section 10: "Stability and Reactivity". Read and follow manufacturer's recommendations.

Conditions for safe storage, including any incompatibilities: Store in original vented container. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls No specific recommendations.

Individual protection measures, such as personal protective equipment

General information: Provide sufficient ventilation during operations which cause vapor formation.

Eye/face protection: Safety Glasses.

Skin Protection

Hand Protection: Protective gloves are recommended.

Other: Wear suitable protective clothing.

Respiratory Protection: No protection is ordinarily required under normal conditions of use and with adequate ventilation.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance

Physical state:	Liquid
Form:	Viscous
Color:	Colorless
Odor:	Odorless
Odor threshold:	No data available.
pH:	Not applicable
Freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	> 279 °F (137 °C) (Closed Cup)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%):	74 %(V) Hydrogen.
Flammability limit - lower (%):	4 %(V) Hydrogen.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	No data available.
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	Acetone: Very slightly soluble Ethanol: Very slightly soluble Diethylether: Miscible (in all proportions). Aliphatic hydrocarbons: Miscible (in all proportions). Aromatic hydrocarbons: Miscible (in all proportions). Chlorinated solvents: Miscible (in all proportions).
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	932 °F (500 °C) Hydrogen.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Other information	
Oxidizing properties:	According to the data on the components Not considered as oxidizing. (according to EC criteria)

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	This product may generate hydrogen gas.
Conditions to avoid:	Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials:	A fire or explosion hazard arises because highly flammable gas (hydrogen) is released when it is in contact with : Strong oxidizers, strong bases and chemical compounds with mobile hydrogen, in the presence of metal salts and complexes.
Hazardous Decomposition Products:	This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air. Thermal decomposition or combustion may liberate carbon oxides, other toxic gases or vapors and amorphous silica. Quantity of hydrogen potentially released (l/kg of product): < 15

11. Toxicological information

Information on likely routes of exposure

Ingestion:	No effects expected (assessment based on ingredients).
Inhalation:	No effects expected (assessment based on ingredients).
Skin Contact:	No effects expected (assessment based on ingredients).
Eye contact:	No effects expected (assessment based on ingredients).

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	No data available.
Dermal	
Product:	No data available.
Inhalation	
Product:	No data available.

Repeated dose toxicity	
Product:	No effects expected (assessment based on ingredients).

Skin Corrosion/Irritation	
Product:	No effects expected (assessment based on ingredients).

Serious Eye Damage/Eye Irritation	
Product:	No effects expected (assessment based on ingredients).

Respiratory or Skin Sensitization	
Product:	No effects expected (assessment based on ingredients).

Carcinogenicity

Product: No effects expected (assessment based on ingredients).

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No effects expected (assessment based on ingredients).

In vivo

Product: No effects expected (assessment based on ingredients).

Reproductive toxicity

Product: No effects expected (assessment based on ingredients).

Specific Target Organ Toxicity - Single Exposure

Product: No effects expected (assessment based on ingredients).

Specific Target Organ Toxicity - Repeated Exposure

Product: No effects expected (assessment based on ingredients).

Aspiration Hazard

Product: No effects expected (assessment based on ingredients).

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No effects expected (assessment based on ingredients).

Aquatic Invertebrates

Product: No effects expected (assessment based on ingredients).

Chronic hazards to the aquatic environment:

Fish

Product: No effects expected (assessment based on ingredients).

Aquatic Invertebrates

Product: No effects expected (assessment based on ingredients).

Toxicity to Aquatic Plants

Product: No effects expected (assessment based on ingredients).

Persistence and Degradability

Biodegradation

Product: The product is not readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential**Bioconcentration Factor (BCF)**

Product: The product is not bioaccumulating.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: No data available.

Mobility in soil: No data available.

Other adverse effects: None known.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Waste of this material should not be mixed with other waste. Provide measures such as vented bungs to ensure pressure relief in the waste container. Contaminated packages should be as empty as possible and equipped with a degassing device.

14. Transport information

This material is not subject to transport regulations.

Environmental hazards: Not regulated.

Special precautions for user: Packaging with a breathing/venting bung are FORBIDDEN for transport by air.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

US TSCA Inventory:	On or in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory.
Australia AICS:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory.

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health		1
Flammability		1
Physical Hazards		1
PERSONAL PROTECTION	B	

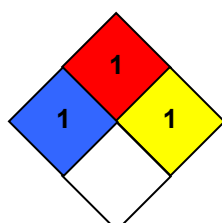
B - Safety Glasses & Gloves

Health		1
Flammability		1
Physical Hazards		1
PERSONAL PROTECTION	B	

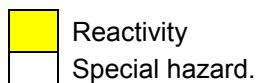
B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

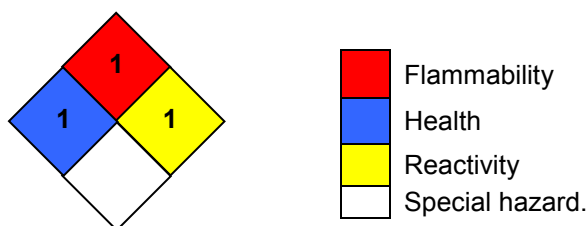
NFPA Hazard ID



Flammability
 Health



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 04/10/2019

Revision Date: 11/14/2014

Version #: 8.0

Further Information: No data available.

Disclaimer: The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.