

Safety Data Sheet
Glacial Methacrylic Acid

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: Glacial Methacrylic Acid

Synonym(s): Methacrylic Acid; 2-Methylpropenoic acid; 2-Methacrylic acid

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

General use: Industrial and laboratory applications

Uses advised against: None known

1.3 Details of the supplier and of the safety data sheet

Manufacturer/Distributor

Silver Fern Chemical, Inc.

2226 Queen Anne Avenue North Suite C

Seattle, WA 98109 USA 1-866-282-3384

Website - www.silverfernchemical.com; email address - info@silverfernchemical.com

1.4 Emergency telephone number

+1-800-535-5053; Outside USA & Canada +1-352-323-3500

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Substance

Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008

Flammable Liquid - Category 4 [H227]

Acute Toxicity, Oral - Category 4 [H302]

Acute Toxicity, Dermal - Category 3 [H311]

Skin Corrosion - Category 1A [H314]

Acute Toxicity, Inhalation - Category 3 [H332]

Single Target Organ Toxicity, Single Exposure - Category 3; STOT SE 3 [H335]

Aquatic Toxicity, Acute - Category 3 [H402]

2.2 Label elements

Hazard symbol(s):



GHS02



GHS05



GHS06

Signal word: Danger

Hazard statement(s): H227 - Combustible liquid
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H402 - Harmful to aquatic life

Precautionary statements:

[Prevention] P210 - Keep away from heat, open flames and hot surface. No smoking.
P261 - Avoid breathing mist or vapor.
P264 - Wash hands and other exposed skin areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment

[Response] P280 - Wear protective gloves, protective clothing and eye protection.
P301 + P330 + P331 + P310 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
P305 + P351 + P338 + P310 - 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 doctor.

P321 - Specific treatment: Immediately contact a POISON CENTER or doctor. Refer to Section 4 of this SDS.
P362 - Take off contaminated clothing and wash before reuse.
P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.
P405 + P403 + P233 + P235 - Store locked up in a well-ventilated place. Keep container tightly closed. Keep cool.
P501 - Dispose of contents and containers in accordance with national and local regulations.

[Storage]
[Disposal]

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Acrid, repulsive odor; stench.
Rapidly absorbed through the skin.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
≥ 98.5	Glacial Methacrylic Acid	79-41-4	201-204-4	607-088-00-5	H227, H302, H311, H314, H332, H335, H402

*This product is stabilized with ≤ 270 ppm of p-Methoxyphenol (CAS #150-76-5).

There are no additional ingredients present in this product 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.

3.2 Mixtures

Not applicable

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

Eyes: Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing and continue rinsing for at least 15 minutes. Wash contaminated clothing thoroughly before reuse. Discard contaminated shoes. Seek immediate medical attention for chemical burns.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. Give plenty of water to drink if the victim is conscious, alert, able to swallow and not experiencing breathing difficulty. DO NOT induce vomiting unless directed to do so by medical personnel. DO NOT administer any other first aid before obtaining the advice of a physician. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes severe burns and serious damage to eyes. Symptoms may include inflammation, swelling, pain, tearing, burns, blurred vision, permanent eye damage and blindness. Can cause irreversible eye injury. Mist or vapor can cause severe eye irritation and eye damage.

Skin: Toxic if absorbed through the skin. Causes severe skin burns and tissue damage.

Inhalation: Harmful if inhaled. Corrosive to the respiratory tract and mucosal linings. Causes chemical burns to the respiratory tract with mucosal irritation, cough and shortness of breath. Exposure may lead to bronchitis, pharyngitis and edemas in the respiratory tract. Effects may be delayed. May be absorbed through the lungs.

Ingestion: Harmful if swallowed. Causes burns to the lips, mouth, throat and gastrointestinal tract. May cause severe and permanent damage to the digestive tract. Causes severe pain, nausea, vomiting, diarrhea and shock. May cause damage to the kidneys and kidney failure. Rapidly absorbed from the gastrointestinal tract. May affect blood pressure. Pulmonary failure is possible after aspiration of vomit.

Chronic: Persons with pre-existing skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this material. Chronic exposure may cause bronchitis and chronic inflammation of the respiratory tract.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

This material will have corrosive effects in which case it may not be advisable to induce vomiting. Acute effects can include mucosal damage and severe laryngeal edema associated with corrosive agents. Treat symptomatically and supportively.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use extinguishing media such as water fog or spray, dry chemical, carbon dioxide or foam.

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

Combustible liquid! Vapors are heavier than air and can travel along the ground to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Closed containers may rupture due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: Avoid high temperatures, hot surfaces and sources of ignition. Heat can cause polymerization.

5.3 Advice to firefighters

Firefighters should wear full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Fight advanced fires from a protected location. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff to prevent environmental contamination. Notify appropriate authorities of potential fire and explosion hazard if liquid enters sewers or waterways.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. If exposed to material, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. Clean up spills immediately. Spill creates a slip hazard.

6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Carefully neutralize the spill with soda ash (sodium carbonate) or calcium carbonate. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect product using non-sparking tools and place into an approved container for proper disposal. **Contaminated monomer may be unstable. Add inhibitor to prevent polymerization. Absorbent can act as a contaminant (removes inhibitor) in liquid monomer. Avoid freestanding monomer with absorbent or add inhibitor to stabilize.** Observe possible material restrictions (Sections 7.2 and 10.5). Contaminated absorbent may pose the same hazard as the spilled product. Dispose of promptly via a licensed waste disposal contractor.

6.4 Reference to other sections

For indications about waste treatment, see Section 13.

SECTION 7 – STORAGE AND HANDLING

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. This material should be used under a hood in the lab. Wash contaminated clothing before reuse. Discard contaminated shoes.

Advice on protection against fire and explosion

Keep away from heat and incompatible materials.

7.2 Conditions for safe storage, including any incompatibilities

Product freezes at 15 °C (59 °F). Improper thawing can result in violent polymerization. Thaw frozen drums by placing them in a heated room up to 40 °C (104 °F) for 48 hours. DO NOT remove any material if stock is frozen or partially frozen. Mix during and after thawing to properly distribute inhibitor. NEVER use steam or electric heating bands. Contact a manufacturer of methyl acrylic acid before attempting to thaw a bulk container of frozen methyl acrylic acid.

Store between 18 - 40 °C (64 - 104 °F) in the original container in dry, cool, well-ventilated areas away from incompatible materials (see Section 10.5), food and drink. *Keep from freezing.* DO NOT store in direct sunlight. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Do not store in an oxygen-free environment. Ground and bond containers when transferring material. Transfer only to approved containers having correct labeling. This product contains inhibitor to stabilize it during shipment and storage. The effectiveness of the inhibitor is dependent on the presence of dissolved oxygen. In order to maintain sufficient dissolved oxygen in the liquid to avoid polymerization, the monomer must always be stored with a vapor space oxygen concentration of 5% to 21%(air).

Keep containers tightly closed when not in use. Protect container from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat or ignition sources. Containers are hazardous when empty as they contain product residue. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep locked up and out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
79-41-4	Methacrylic Acid	20 ppm; 70 mg/m ³ TWA; Skin	20 ppm TWA	20 ppm; 70 mg/m ³ TWA; Skin

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

8.2 Exposure controls

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Material should be used under a hood in the laboratory. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

Eye/face protection: Wear protective splash goggles or safety glasses with unperforated side shields and a face shield during use.

Hand protection: Wear gloves made of Neoprene, butyl rubber or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Skin protection: Wear protective clothing. Wear protective boots if the situation requires.

Respiratory protection: Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Environmental exposure controls: Do not empty into drains.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection



Splash Goggles



Gloves



Protective Apron



Vapor Respirator

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Pungent, irritating
Odor Threshold	No data available
Molecular Weight	86.09 g/mol
Chemical Formula	C ₄ H ₈ O ₂
pH	No data available
Freezing/Melting Point	15.4 - 15.5 °C (59.7 - 59.9 °F)
Boiling Point Range	162 °C (323.6 °F) @ 1,013 hPa
Evaporation Rate	< 1 [n-BuOAc = 1]
Flammability (solid, gas)	Not applicable
Flash Point	67 °C (152.6 °F) Tag closed cup @ 1,013 hPa
Autoignition Temperature	400 °C (752 °F) @ 1,013 hPa
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	1.6% (v)
Upper Explosive Limit (UEL)	8.7% (v)
Vapor Pressure	0.97 hPa @ 20 °C
Vapor Density	> 1 [Air = 1]
Density	1.0141 g/cc @ 20 °C
Viscosity, Dynamic	1.3 mPa.s @ 25 °C
Solubility in Water	98 g/l @ 20 °C
Partition Coefficient (n-octanol/water)	log P _{ow} = 0.93

Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	No data available

9.2 Other Data

No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

This material is stable under normal handling conditions and use.

10.2 Chemical Stability

This material is stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

Inhibitor is added to this product to prevent polymerization; however, this material can undergo hazardous polymerization under certain conditions. Excessive aging, heat, contamination with polymerization catalysts, oxygen-free atmosphere, inhibitor depletion or ultraviolet light/direct sunlight may cause polymerization. Freezing followed by improper thawing and inhibitor redistribution may cause hazardous polymerization. Uncontrolled polymerization may produce a rapid release of heat with the potential for an explosion of unvented closed containers.

10.4 Conditions to avoid

Heat, sources of ignition, temperature extremes, contact with incompatible materials, contact with metals

10.5 Incompatible materials

Oxidizing agents, reducing agents, acids, bases, ultraviolet light or direct sunlight, free radical initiators, organic peroxides, mild steel

10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon, irritating and toxic fumes.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

LD₅₀, rat: 1,320 mg/kg

Acute inhalation toxicity

LC₅₀, rat: > 1 mg/l, 4 h

Acute dermal toxicity

LC₅₀, rabbit: 500 - 1,002 g/kg

Skin irritation

Causes severe skin burn.

Eye irritation

Causes burns and serious eye damage. Risk of blindness!

Sensitization

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

No data available

Specific organ toxicity - single exposure

May cause respiratory irritation due to corrosivity of material.

Specific organ toxicity - repeated exposure

Prolonged and repeated exposures may cause respiratory effects.

Aspiration hazard

No data available

11.2 Further information

This product contains no substances present at levels greater than or equal to the 0.1% threshold (de minimis) that are identified as probable, possible, potential or confirmed carcinogens by ACGIH, IARC, NTP or OSHA. No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to aquatic life on an acute basis organisms.

Toxicity to fish:	LC ₅₀ - Oncorhynchus mykiss (Rainbow trout), flow-through test, 96 h: 85 mg/l
Toxicity to aquatic invertebrates:	EC ₅₀ - Daphnia magna (Water flea), flow-through test 48 h: > 130 mg/l
Toxicity to aquatic plants:	EC ₅₀ - Pseudokirchneriella subcapitata (Green algae), static test, 72 h: 45 mg/l, growth rate inhibition
Toxicity to bacteria:	EC ₁₀ - Pseudomonas putida (Bacteria): 100 mg/l, growth inhibition

12.2 Persistence and degradability

This material is readily biodegradable.

12.3 Bioaccumulation potential

This material will not bioaccumulate.

12.4 Mobility in soil

The potential for mobility in soil for this material very high.

12.5 Results of PBT and vPvB assessment

This material does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other effects

Additional ecological information

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Methods of disposal: After the addition of excess inhibitor, incinerate liquid and contaminated diking material in accordance with local, state, and federal regulations. The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

RCRA F-Series: No listings above the reportable threshold (de minimis)

RCRA U-Series: No listings above the reportable threshold (de minimis)

SECTION 14 – TRANSPORTATION INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

Limited quantity for corrosive liquids in Packing Group II when inner packagings are not over 1.0 liter (0.3 gallon) net capacity each, packed in a strong outer packaging.

USA DOT (Ground Transportation) - Bulk and Non-bulk

Proper Shipping Name	Methacrylic acid, stabilized
Hazard Class	8
UN	UN2531
Packing Group	II
NAREG	Guide #153P
Packaging Authorization	Non-Bulk: 49 CFR 173.202; Bulk: 173.242
Packaging Exceptions	49 CFR 173.154

IMO/IMDG (Water Transportation)

Proper Shipping Name	Methacrylic acid, stabilized
Hazard Class	8
UN	UN2531
Packing Group	II
Marine Pollutant	No
EMS Number	F-A, S-B

ICAO/IATA (Air Transportation)

Proper Shipping Name	Methacrylic acid, stabilized
Hazard Class	8
UN	UN2531
Packing Group	II
Quantity Limitations	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 30 l; Passenger Aircraft: 1 l

Drum Label(s)



RID/ADR (Rail Transportation)	
Proper Shipping Name	Methacrylic acid, stabilized
Hazard Class	8
UN	UN2531
Packing Group	II

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

OSHA Process Safety Management Standard: This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f)(2)) and Chemical Code Number: No listings

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: No listings

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: No listings

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories:

Combustible liquid	Toxic in contact with skin	May cause respiratory irritation
Harmful if swallowed or inhaled	Causes severe skin burns and eye damage	

SARA 313 Information: None of the components of the product exceed the threshold (de minimis) reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: None of the components of the product exceed the threshold (de minimis) reporting levels of established by these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): None of the components of the product exceed the threshold (de minimis) reporting levels established under CERCLA.

Clean Air Act (CAA)

This product does not contain Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain Class 1 Ozone depleters.

This product does not contain Class 2 Ozone depleters.

Clean Water Act (CWA)

This product does not contain Hazardous Substances.

This product does not contain Priority Pollutants.

This product does not contain Toxic Pollutants.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

This product contains no chemical(s) known to the state of California to cause cancer birth defects or reproductive harm in concentrations that exceed the threshold (de minimis) reporting levels established under Proposition 65.

Other U.S. State Inventories

Methacrylic Acid (CAS #79-41-4) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, NJ, NY, PA, RI, WI.

Canada

WHMIS Hazard Classification

Combustible liquid	Toxic in contact with skin or if inhaled	Causes severe damage to the respiratory tract
Harmful if swallowed	Causes severe skin burns and eye damage	

Canadian National Pollutant Release Inventory (NPRI): None of the components of this material are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 1 (low hazard to waters)

Global Chemical Inventory Lists

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes

Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*Yes - All components of this product comply with the inventory requirements administered by the governing country.
No - One or more components of this product are not on the inventory or are exempt from listing.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

HEALTH	* 3
FLAMMABILITY	2
PHYSICAL HAZARD	2
PERSONAL PROTECTION	H

H = safety goggles, gloves, apron
& vapor respirator

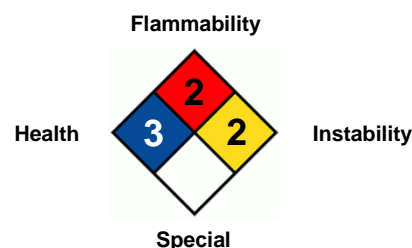
HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe
* = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate
3 = High 4 = Extreme

National Fire Protection Association (NFPA)



Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists	LD_{Lo}	Lowest Lethal Dose
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	mppcf	Millions of Particles Per Cubic Foot
CAS	Chemical Abstract Services	NA	North America
CFR	Code of Federal Regulations	NAERG	North American Emergency Response Guide Book
COC	Cleveland Open Cup	NIOSH	National Institute for Occupational Safety & Health
DOT	Department of Transportation	NTP	National Toxicology Program
EC₅₀	Half maximal effective concentration	OSHA	Occupational Safety and Health Administration
EMS	Emergency Response Procedures for Ships Carrying	PBT	Persistent, Bioaccumulating and Toxic
EPA	Environmental Protection Agency	PEL	Permissible exposure limit
ErC₅₀	Reduction of Growth Rate	PMCC	Pensky-Martens Closed Cup
ERG	Emergency Response Guide Book	ppm	Parts Per Million
FDA	Food and Drug Administration	RCRA	Resource Conservation and Recovery Act
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	RID	Dangerous Goods by Rail
HCS	Hazard Communication Standard	RQ	Reportable Quantity
IARC	International Agency for Research on Cancer	TCC/Tag	Tagliabue Closed Cup
IATA	International Air Transport Association	TLV	Threshold Limit Value
IC₅₀	Half Maximal Inhibitory Concentration	TSCA	Toxic Substance Control Act
ICAO	International Civil Aviation Organization	TWA	Time-weighted Average
IDLH	Immediately Dangerous to Life and Health	UN	United Nations
IMDG	International Maritime Dangerous Goods	VOC	Volatile Organic Compounds
IMO	International Maritime Organization	vPvB	Very Persistent and Very Bioaccumulating
LC₅₀	50% Lethal Concentration	WHMIS	Workplace Hazardous Materials Information System
LD₅₀	50% Lethal Dose		

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

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