

Safety Data Sheet
Caustic Soda Beads

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: Caustic Soda Beads
Synonym(s): Sodium hydroxide; Sodium hydrate; Soda lye; White caustic

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

General use: Industrial and laboratory use
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
Skin Corrosion - Category 1B [H314]

2.2 Label elements

Hazard symbol(s):



GHS05

Signal word: Danger

Hazard statement(s): H314 - Causes severe skin burns and eye damage

Precautionary statements:

- [Prevention]** P260 - Do not breathe dust.
P264 - Wash hands and other exposed skin areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing and eye protection.
- [Response]** P301 + P330 + P331 + P310 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
P303 + P361 + P350 - IF ON SKIN: 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: Contact a POISON CENTER or doctor. Refer to Section 4 of this SDS.
P363 - Wash contaminated clothing before reuse.
- [Storage]** P405 - Store locked up.
- [Disposal]** P501 - Dispose of contents and containers in accordance with national and local regulations.

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

No data available

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
> 99	Sodium Hydroxide	1310-73-2	215-185-5	011-002-00-6	H314

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 product dust causes respiratory irritation or distress, move the exposed person to fresh air immediately. 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 20 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. If skin irritation persists, seek medical attention.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. If vomiting occurs, the head should be kept lower than the waist so that vomit does not enter the lungs. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. If the victim is unconscious, place in the recovery position and get immediate medical attention. Immediately contact a POISON CENTER or doctor.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes burns to the eyes and serious eye damage. Symptoms may include redness, swelling, pain, tearing, blurred vision and burns. May cause permanent eye damage and possible blindness. Eye damage may be delayed.

Skin: Causes skin burns and tissue damage. May cause skin rash from mild exposure and cold, clammy skin with cyanosis or pale color. May cause deep, penetrating ulcers of the skin. May cause permanent skin damage.

Inhalation: Harmful if inhaled. Inhalation of mist or spray causes severe irritation of the respiratory tract with coughing, burns, breathing difficulty and possible coma. Irritation may lead to chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. May cause systemic effects.

Ingestion: Harmful if swallowed. Causes severe burns to the lips, mouth, throat and gastrointestinal tract with abdominal pain, vomiting, diarrhea, shock and possible death. May cause perforation of and severe and permanent damage to the digestive tract. May cause circulatory system failure.

Chronic: Prolonged or repeated skin contact may cause drying and cracking of the skin, dermatitis or aggravate existing skin conditions. Chronic eye contact may cause conjunctivitis.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Sodium Hydroxide is corrosive. May cause major burns to all surfaces contacted. May cause major burns to all surfaces contacted. Prolonged dilution with water is required. Neutralization of eye burns is absolutely contraindicated; for skin, 2% acetic acid has been recommended, but washing with water is effective. Ingestion requires milk or water dilution, consideration of esophagoscopy and management for possible esophageal stricture.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use extinguishing media suitable for the surrounding fire.

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

Sodium hydroxide is non-flammable. However, on contact with most metals it liberates flammable hydrogen gas, which can be explosive when confined. Contact with water or moisture may generate sufficient heat to ignite nearby combustible material. Closed containers may explode 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: This product is not considered to be an explosion hazard.

5.3 Advice to firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. Water contaminated by this material must be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

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. Sodium hydroxide is deliquescent; it absorbs relatively large amounts of water from the air, forming a liquid solution. It also readily absorbs carbon dioxide from air. 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.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. DO NOT flush large spills down the drain. Collect product and place into an approved container for proper disposal. Do not use straw brooms or other combustible material to collect product. Do not return solid to the original container for reuse. Observe possible material restrictions (Sections 7.2 and 10.5). Clean contaminated area with soap and water. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of material 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. NO SMOKING. Do not breathe vapor or mist. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing thoroughly before reuse. Discard contaminated shoes.

Advice on protection against fire and explosion

Product does not present a fire or explosion hazard.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area away from incompatible materials (see Section 10.5), food and drink. Keep in the original container or transfer only to approved containers having correct labeling. DO NOT store in metal containers. Keep away from strong acids, flammable liquids and organic halogens. Deliquescent material! Keep containers tightly closed when not in use to prevent moisture absorption. Transfer only to approved containers having correct labeling. Keep container tightly closed when not in use. Protect containers from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers of this material are hazardous when empty as they contain product residues. 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
1310-73-2	Sodium Hydroxide	2 mg/m ³ TWA	2 mg/m ³ , ceiling	2 mg/m ³ , ceiling; 10 mg/m ³ IDLH

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. 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 during use. A face shield is recommended if splashing is anticipated during use.

Hand protection: Wear Nitrile rubber gloves 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



*It is recommended that a full face shield be worn in addition to splash goggles when using this product.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	White beads or pellets
Odor	Odorless
Odor Threshold	No data available
Molecular Weight	40 g/mol
Chemical Formula	NaOH
pH	13.5 (0.1 M aqueous solution)
Freezing/Melting Point	323 °C (613 °F)
Boiling Point Range	1,388 °C (2,530 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	Non-flammable
Flash Point	Does not flash
Autoignition Temperature	No data available
Decomposition Temperature	> 100 °C (> 212 °F)
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	2.4 kPa @ 20 °C
Vapor Density	< 1.0 [Air = 1]
Specific Gravity	2.13 @ 20 °C
Viscosity	No data available
Solubility in Water	Soluble
Partition Coefficient (n-octanol/water)	Not applicable
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	0%

9.2 Other Data

None known

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 conditions. Readily absorbs moisture and carbon dioxide from the air and deliquesces.

10.3 Possibility of hazardous reactions

Reacts violently, exothermically and explosively with water, strong acids, flammable liquids, organohalogens, nitro compounds and amphoteric metals. Reactions with metals produce flammable hydrogen gas. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Avoid extreme heat, moisture, exposure to air, metals and contact with incompatible materials

10.5 Incompatible materials

Metals, acids, flammable liquids, acetone, nitriles, phosphides, halogens, halogen-halogen compounds, chlorinated solvents, ethylene oxide, hydrazine hydrate, hydroxylamine, anhydrides, peroxides, acrolein, acid chlorides, silver salt, hydrogen peroxide, organic nitro compounds, ammonium compounds, organic combustible substances, phenols

10.6 Hazardous decomposition products

Thermal decomposition products include oxides of sodium.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

LD₅₀, rat: 4,090 mg/kg

Acute inhalation toxicity

LC₅₀, rat: 2,300 mg/m³ - 2 h

Acute dermal toxicity

No data available

Skin irritation

Causes severe skin burns.

Eye irritation

Causes serious eye damage. Risk of blindness!

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

No data available

Specific organ toxicity - repeated exposure

No data available

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

Sodium Hydroxide is slightly toxic to aquatic organisms on an acute basis. Large discharges to the environment may increase the pH of aquatic systems to a pH >11, which may be fatal to aquatic life and soil micro-organisms.

Acute toxicity to fish:

LC₅₀ - Gambusia affinis (Mosquito fish), static, 96 h: 125 mg/l

LC₅₀ - Lepomis macrochirus (Bluegill sunfish), 48 h: 99 mg/l

Acute toxicity to aquatic invertebrates:

LC₅₀ - Daphnia magna (Water flea), pH 9.1 - 9.5: 156 mg/l

Acute toxicity to aquatic plants:

Freshwater algae are destroyed at a pH >8.5.

12.2 Persistence and degradability

Inorganic substances are not biodegradable. Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulation potential

This material will not bioaccumulate.

12.4 Mobility in soil

This material has high mobility in soil.

12.5 Results of PBT and vPvB assessment

Not applicable

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: 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 solids in Packing Group II when inner packagings are not over 1.0 kg (2.2 lb) net capacity each, packed in a strong outer packaging.

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

Proper Shipping Name Sodium hydroxide, solid
Hazard Class 8
UN/NA UN1823
Packing Group II
NEAREG Guide #154
Packaging Authorization Non-Bulk: 49 CFR 173.212; Bulk: 173.240
Packaging Exceptions 49 CFR 173.154

Drum Label(s)



IMO/IMDG (Water Transportation)

Proper Shipping Name Sodium hydroxide, solid
Hazard Class 8
UN/NA UN1823
Packing Group II
Marine Pollutant No
EMS Number F-A, S-B

ICAO/IATA (Air Transportation)

Proper Shipping Name Sodium hydroxide, solid
Hazard Class 8
UN/NA UN1823
Packing Group II
Quantity Limitations 49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 50 kg; Passenger Aircraft: 15 kg

RID/ADR (Rail Transportation)

Proper Shipping Name Sodium hydroxide, solid
Hazard Class 8
UN/NA UN1823
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.

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 Not listed

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: Not listed

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: Not listed

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: Causes severe skin burns and eye damage

SARA 313 Information: None of the chemicals in this product exceed the threshold (de minimis) reporting levels established by 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 this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

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

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substance: Sodium Hydroxide (CAS #1310-73-2): RQ = 454 kg (1,000 lb)

Clean Air Act (CAA)

This product does not contain any 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)

Sodium Hydroxide (CAS #1310-73-2) is a Hazardous Substance.

This product does not contain any Priority Pollutants.

This product does not contain any 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

Sodium Hydroxide (CAS #1310-73-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, MA, MN, NJ, PA, RI, WA, WI.

Canada

WHMIS Hazard Classification

Causes severe skin burns and eye damage

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

European Economic Community

WGK, Germany (Water danger/protection): 1 (slightly hazardous to water)

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	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

C = safety glasses, gloves & apron

HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate

3 = Serious 4 = Severe

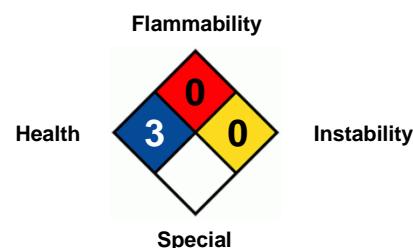
* = Chronic Health Hazard

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 ₅₀	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
EC ₅₀	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
ErC ₅₀	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		

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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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