SAFETY DATA SHEET
Liquid CIP Cleaner

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: **Liquid CIP Cleaner**
Product code: Liquid CIP Cleaner
Synonym(s): Chlorinated, aqueous alkaline solution

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

General use: Cleaner and descaler for processing equipment
Uses advised against: None specified

1.3 Details of the supplier and of the safety data sheet

Manufactured by
The Bullen Companies
1640 Delmar Drive
Folcroft, PA 19032 USA
+1-800-444-8900

Manufactured for
Ag ProVision, LLC
277 Faison McGowan Road
Kenansville, NC 28349 USA
+1-910-296-0302
customercare@agprovision.com

1.4 Emergency telephone number

In the continental USA call CHEMTREC: +1-800-424-9300 (24 hours)
Outside the continental USA call CHEMTREC: +1-703-527-3887 (24 hours)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture
Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008
Acute toxicity, oral - Category 4 [H302]
Skin corrosion - Category 1A [H314]

2.2 Label elements

Hazard symbol(s):

GHS05 GHS07

Signal word: **Danger**

Hazard statement(s):
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage

Precautionary statements:

[Prevention]
P260 - Do not breathe 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.
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 + P353 + P310 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor.
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 call 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

Repeated exposure may cause skin dryness or cracking

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
15 - 40	Potassium hydroxide	1310-58-3	215-181-3	019-002-00-8	H302, H314
1 - 6	Sodium hypochlorite	7681-52-9	231-668-3	017-011-00-1	H314, H400
0.5 - 3	Gluconic acid	526-95-4	208-401-4	----------	----------

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.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product mist or vapor 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 ingested the substance. Induce 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. If symptoms persist or if the victim feels unwell, seek 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. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists or in case of chemical burns, 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. Vomiting may occur spontaneously. To prevent aspiration of vomitous into the lungs, lay the victim on one side with the head lower than the waist. 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 eye irritation and serious eye damage. Symptoms may include redness, swelling, pain, tearing, burns, blurred vision and permanent eye damage. This material is extremely destructive to eyes, mucous membranes and surrounding tissues.

Skin: Causes severe skin irritation and burns. Symptoms may include localized redness, itching, pain and burns. Prolonged and repeated contact with unprotected skin may cause drying and cracking of the skin and dermatitis.

Inhalation: Vapor and mist may be harmful if inhaled. Material is extremely destructive to the mucous membranes and upper respiratory tract. May cause irritation of the nose, throat and respiratory system with headache, cough, sore throat, chest tightness and breathing difficulty.

Ingestion: Harmful if swallowed. Causes burns to the lips, mouth and gastro-intestinal tract. Symptoms may include nausea, vomiting, abdominal pain and diarrhea. May cause severe and permanent damage to the digestive tract. May cause peroration of the esophagus and stomach.

Chronic: Persons with pre-existing skin disorders, eye problems or impaired respiratory function may be more susceptible to the effects of this material. Prolonged or repeated exposure to mist or vapor may result in chronic eye irritation and irritation of the respiratory system that leads to frequent attacks of bronchial infection. Prolonged and repeated skin contact may cause dermatitis. Sodium Hypochlorite is a suspected carcinogen (refer to Section 11.2).

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Treat symptomatically and supportively.

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: No data available

5.2 Special hazards arising from the substance or mixture

CORROSIVE. This product is non-flammable and non-combustible. However, on contact with some metals it will liberate hydrogen gas, which is flammable and when confined, explosive. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas or can travel along the ground to sources of ignition causing flashback. Chlorine gas and hydrogen chloride gas may also be released during a fire. 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: Contact with some metals will liberate hydrogen gas, which is explosive when confined.

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. If possible, water contaminated by this material should 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. 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

Approach spill from upwind direction. DO NOT flush large spills down the drain. Cover drains and contain spill. Cover spill with a large quantity of non-combustible, inert absorbent (e.g. sand, vermiculite, diatomaceous earth). Do not use combustible materials such as sawdust. Collect material and place into an approved container for proper disposal. 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. Contaminated absorbent material may pose the same hazard as the spilt product. .

Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).

6.4 Reference to other sections

See Section 13 for additional waste treatment information.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. DO NOT with other cleaning agents that may liberate chlorine gas. Do not get in eyes or on skin or clothing. Do not breathe mist or vapor. No smoking. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes thoroughly before reuse.

Advice on protection against fire and explosion

Keep away from heat and incompatible materials.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry, well-ventilated areas away from incompatible materials (see Section 10.5), food and drink. 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 leakage. Containers 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
1310-58-3	Potassium hydroxide	----------	2 mg/m^3 TWA, ceiling	2 mg/m^3 TWA, ceiling

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 safety glasses with unperforated side shields or protective splash goggles during use.

Hand protection: Wear gloves 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.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, pale yellow liquid
Odor	Chlorine
Odor Threshold	0.3 ppm (chlorine)
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH	13.75 - 13.95
Melting Point	< 0 °C (< 32 °F) [estimated]
Initial Boiling Point	100 °C (212 °F) [estimated]
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Flash Point	Not applicable
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.240
Viscosity	No data available
Solubility in Water	Complete
Partition Coefficient (n-octanol/water)	No data available
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	> 85%

9.2 Other Data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported during normal conditions of handling and use.

10.2 Chemical Stability

This material is stable under recommended conditions of storage and handling. Slowly decomposes on contact with air. Decomposition rate increases with the concentration and temperature. Exposure to sunlight accelerates decomposition. Sodium hypochlorite becomes less toxic with age.

10.3 Possibility of hazardous reactions

Violent exothermic reactions occur with strong acids. Hazardous gases may be generated from contact with acids, ammonium hydroxide (aqua ammonia) or cleaners containing ammonia compounds. Violent reactions may occur with some organic compounds. Reacts with some metals to release hydrogen and chlorine gases. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Elevated temperatures, incompatible materials, exposure to light, combustible materials

10.5 Incompatible materials

Strong oxidizing agents, strong reducing agents, acids, ammonia, amines, ammonium salts, methanol, metals, nitrites, halogenated organic compounds, glycols

10.6 Hazardous decomposition products

Thermal decomposition products may include chlorine gas, hydrogen chloride gas, hydrochloric acid, potassium oxide and sodium oxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity
LD_{50}, rat: > 2,000 mg/kg [calculated]

Acute inhalation toxicity
No data available

Acute dermal toxicity
No data available

Skin irritation
Causes severe skin irritation and burns.

Eye irritation
Causes severe eye irritation and serious eye damage.

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.

Specific organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Further information

Sodium Hypochlorite (CAS #7681-52-9): IARC, Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*. Not listed as a carcinogen by ACGIH, 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

Potassium hydroxide is slightly toxic to aquatic organisms on an acute basis. Large discharges to the environment may increase the pH of aquatic systems to values >10, which may be fatal to aquatic life and soil micro-organisms.

Sodium hypochlorite is very toxic to aquatic life. Industrial use sometimes results in the discharge of weak solutions of sodium hypochlorite directly into the environment, which is rapidly removed by reaction. This substance can be handled at all stages of manufacture and use with a minimal impact on the environment.

12.2 Persistence and degradability

Organic components in this material are biodegradable. Inorganic substances in this product 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 product moves readily through soil.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other effects

Additional ecological information
Do not allow material to enter 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

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 always 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 - TRANSPORT 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) information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

Limited quantity for corrosive materials 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	Corrosive liquid, basic, inorganic, n.o.s. (Potassium Hydroxide)
Hazard Class	8
UN/NA	UN3266
Packing Group	II
NEAREG	Guide #154
Packaging Authorization	Non-Bulk: 49 CFR 173.202; Bulk: 173.242
Packaging Exceptions	49 CFR 173.154
IMO/IMDG (Water Transportation)	
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s. (Potassium Hydroxide)
Hazard Class	8
UN/NA	UN3266
Packing Group	II
Marine Pollutant	No
EMS Number	F-A, S-B
ICAO/IATA (Air Transportation)	
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s. (Potassium Hydroxide)
Hazard Class	8
UN/NA	UN3266
Packing Group	II
Quantity Limitations	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 30 l; Passenger Aircraft: 1 l
RID/ADR (Rail Transportation)	
Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s. (Potassium Hydroxide)
Hazard Class	8
UN/NA	UN3266
Packing Group	II

Drum Label(s)

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 material 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: Harmful if swallowed Causes severe skin burns and eye damage

SARA 313 Information: None of the chemicals in this product are subject to the 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 substances:
Potassium Hydroxide (CAS #1310-58-3): RQ = 454 kg (1,000 lb) Sodium Hypochlorite (CAS #7681-52-9): RQ = 45.4 kg (100 lb)

Clean Air Act (CAA)
This product does not contain are Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).
This product does not contain Class 1 ozone depletors.
This product does not contain Class 2 ozone depletors.

Clean Water Act (CWA)
Potassium Hydroxide and Sodium Hypochlorite (as Hypochlorite Solutions) are Hazardous Substances listed under the CWA.
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
Potassium Hydroxide (CAS #1310-58-3) 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.

Sodium Hypochlorite (CAS #7681-52-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, MA, MN, NJ, NY, PA.

Canada

WHMIS Hazard Classification
Causes skin burns and eye damage

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

European Economic Community

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

Global Chemical Inventory Lists

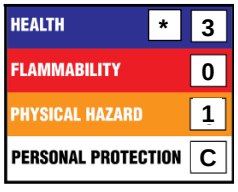
Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	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)

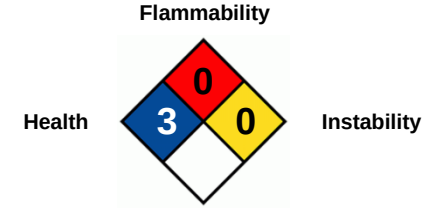


C = safety glasses, gloves,

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)



& an apron **Special**

Full Text of GHS Hazard Phrases Referenced in Section 3 (not covered in Section 2)
H400 - Very toxic to aquatic life

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
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
IC_{50}	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
LC_{50}	50% Lethal Concentration	**WHMIS**	Workplace Hazardous Materials Information System
LD_{50}	50% Lethal Dose		

DISCLAIMER

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Revision Date: 19 October 2021, Version 3
Supersedes SDS: 29 December 2014, Version 2

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