

SAFETY DATA SHEET

M48009 - NA - EN



TECHNICAL GRADE CALCIUM CHLORIDE SOLUTION

SDS No.: M48009

SDS Revision Date: 17-Jul-2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification:	Chemical Solutions, Inc. MeltSnow.com P.O. Box 675 Franklin, MA 02038-0675 1-800-637-4504
24 Hour Emergency Telephone Number:	CHEMTREC (within USA and CHEMTREC (outside USA and Canada): 1-800-424-9300;Canada): 703-527-3887; CHEMTREC Contract No: CCN16186
To Request an SDS:	Sales@meltsnow.com
Customer Service:	1-800-637-4504 or 1-508-520-3900
Product Identifier:	TECHNICAL GRADE CALCIUM CHLORIDE SOLUTION
Synonyms:	Calcium Dichloride, Calcium Chloride Aqueous Solution, Liquid Calcium Chloride, Calcium Chloride
Product Use:	Agriculture: Pre-harvest, Concrete Acceleration, Drilling Fluid Additive, Dust Control, Ice Melting, Refrigeration, Road Base Stabilization and Full Depth Reclamation, Tire Weighting, Water Treatment (Non-potable)
Uses Advised Against:	None identified.

2. HAZARDS IDENTIFICATION

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OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EMERGENCY OVERVIEW:

Color: Clear
Physical state Liquid
Odor: Odorless

Signal Word: **WARNING**

MAJOR HEALTH HAZARDS: CAUSES SERIOUS EYE IRRITATION. CAUSES SKIN IRRITATION.

PRECAUTIONARY STATEMENTS: Wash thoroughly after handling.

GHS CLASSIFICATION:

GHS: CONTACT HAZARD - SKIN:	Category 2 - Causes skin irritation
GHS: CONTACT HAZARD - EYE:	Category 2A - Causes serious eye irritation
GHS: ACUTE TOXICITY - ORAL:	Not classified as acutely toxic for oral exposure
GHS: CARCINOGENICITY:	This product is not classified as a carcinogen by NTP, IARC or OSHA.

UNKNOWN ACUTE TOXICITY:

A percentage of this product consists of ingredient(s) of unknown acute toxicity.

Unknown Acute Dermal Toxicity:

3% of this product consists of ingredient(s) of unknown acute dermal toxicity.

GHS SYMBOL:

Exclamation mark



GHS SIGNAL WORD: **WARNING**

GHS HAZARD STATEMENTS:

GHS - Health Hazard Statement(s)

Causes skin irritation
Causes serious eye irritation

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GHS - Precautionary Statement(s) - Prevention

Wear eye and face protection
Wear protective gloves
Wash thoroughly after handling

GHS - Precautionary Statement(s) - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water
Take off contaminated clothing and wash it before reuse
If skin irritation occurs: Get medical advice/attention
Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)

GHS - Precautionary Statement(s) - Storage

There are no Precautionary-Storage phrases assigned

GHS - Precautionary Statement(s) - Disposal

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

Hazards Not Otherwise Classified (HNOC)

None identified

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Calcium Dichloride, Calcium Chloride Aqueous Solution, Liquid Calcium Chloride, Calcium Chloride

Component	Percent [%]	CAS Number
Water	53 - 72	7732-18-5
Calcium chloride	28 - 42	10043-52-4
Potassium Chloride	< 3	7447-40-7
Sodium Chloride	< 2	7647-14-5

Notes: Potassium chloride and sodium chloride are impurities from the naturally-occurring source material, brine solution.

4. FIRST AID MEASURES

INHALATION: If inhalation of mist, vapor, or spray occurs and adverse effects result, remove to uncontaminated area. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION.

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SKIN CONTACT: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry and shoes. Wash contaminated areas with large amounts of water. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

EYE CONTACT: Immediately flush contaminated eyes with a directed stream of water for as long as possible. Remove contact lenses, if present, then continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: Give one cup (8 ounces or 240 ml) of water or milk if available. Vomiting may be induced. If vomiting occurs spontaneously, keep airway clear. Give more water or milk when vomiting stops. GET MEDICAL ATTENTION. Never give anything by mouth to an unconscious or convulsive person.

Acute Symptoms/Effects: Eye Irritation: Conjunctival swelling and cornea opacification from hypertonic solution. Skin Irritation: Prolonged contact and occlusion may cause more severe symptoms. Damage is localized to contact areas.

Inhalation (Breathing): Inhaling mist, spray, or vapor may cause irritation to upper respiratory tract (nose and throat).

Skin: Skin Irritation: Skin exposure may cause slight irritation, redness, itching, swelling. May cause more severe response if skin is damp, abraded (scratched or cut), or covered by clothing, gloves, or footwear. Prolonged contact may cause more severe symptoms. Damage is localized to contact areas.

Eye: Eye Irritation: Eye exposure may cause serious eye irritation and pain. May cause conjunctival swelling and cornea opacification from hypertonic solution.

Ingestion (Swallowing): Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.

Delayed Symptoms/Effects:

- Chronic exposures to skin and mucus membranes that cause irritation may cause a chronic dermatitis or mucosal membrane problem

Interaction with Other Chemicals Which Enhance Toxicity: None known.

Medical Conditions Aggravated by Exposure: Any skin condition that disrupts the skin, such as abrasions, cuts, psoriasis, fungal infections, etc. Any eye condition that compromises tear production, conjunctiva, or normal corneal homeostasis.

Protection of First-Aiders: At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission. If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to Physician: Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Fire Hazard: This material does not burn.

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

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Fire Fighting: Keep unnecessary people away, isolate hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Hazardous Combustion Products: Formed under fire conditions: hydrogen chloride gas, calcium oxide

Lower Flammability Level (air): Not applicable

Upper Flammability Level (air): Not applicable

Flash point: Not applicable

Auto-ignition Temperature: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard on some surfaces. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Methods and Materials for Containment and Cleaning Up:

Small and large spills: Contain spilled material if possible. Absorb with materials such as sand. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13, Disposal considerations, for additional information.

Environmental Precautions:

Prevent large spills from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling. See Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Safe Storage Conditions:

Protect from atmospheric moisture. Keep containers closed when not in use.

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Incompatibilities/ Materials to Avoid:

Avoid contact with: bromide trifluoride, 2-furan percarboxylic acid because calcium chloride is incompatible with those substances, Contact with zinc forms flammable hydrogen gas, which can be explosive, Catalyzes exothermic polymerization of methyl vinyl ether, May release flammable hydrogen gas, Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Limit(s): None.

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): None.

- *The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).*

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

Additional Advice: Use good personal hygiene. Do not consume or store food in the work area. Wash hands and affected skin immediately after handling, before smoking or eating, before breaks, and at the end of the workday.

ENGINEERING CONTROLS: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear safety glasses with side-shields. Wear chemical safety goggles and/or a face-shield to protect against skin and eye contact when appropriate.

Skin and Body Protection: Wear clean, body-covering clothing. Wear appropriate clothing to avoid skin contact.

Hand Protection: Use gloves chemically resistant to this material. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Neoprene, Polyvinyl chloride ("PVC" or "vinyl"), Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

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Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: High efficiency particulate air (HEPA) N95. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color:	Clear
Odor:	Odorless
Odor Threshold [ppm]:	Not applicable.
Decomposition Temperature:	Not applicable
Boiling Point/Range:	117 °C (243 °F)
Freezing Point/Range:	Varies.
Melting Point/Range:	Not applicable
Vapor Pressure:	9 - 15 mm Hg @ 25 °C (77 °F)
Vapor Density (air=1):	No data available
Relative Density - Specific Gravity (water=1):	1.392 @ 25 °C (77 °F)
Density:	11.6 lbs/gal @ 21°C (70 °F)
Bulk Density:	Not applicable
Water Solubility:	Completely miscible
pH:	9 - Estimated (undiluted)
Evaporation Rate (ether=1):	No data available
Partition Coefficient (n-octanol/water):	Not applicable
Flash point:	Not applicable
Lower Flammability Level (air):	Not applicable
Upper Flammability Level (air):	Not applicable
Auto-ignition Temperature:	Not applicable
Viscosity:	2.6 cSt @ 25 °C - Estimated
Hygroscopic:	Yes

10. STABILITY AND REACTIVITY

Reactivity: Hygroscopic.

Chemical Stability: Stable at normal temperatures and pressures.

Possibility of Hazardous Reactions:
No data available.

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Conditions to Avoid:

None known.

Incompatibilities/ Materials to Avoid:

Avoid contact with: bromide trifluoride, 2-furan percarboxylic acid because calcium chloride is incompatible with those substances, Contact with zinc forms flammable hydrogen gas, which can be explosive, Catalyzes exothermic polymerization of methyl vinyl ether, May release flammable hydrogen gas, Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates

Hazardous Decomposition Products: Formed under fire conditions: hydrogen chloride gas, calcium oxide

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

PRODUCT TOXICITY DATA: LIQUIDOW® TECHNICAL GRADE CALCIUM CHLORIDE SOLUTION

LD50 Oral: 2282 mg/kg - Acute Oral Toxicity Estimate for the mixture	LD50 Dermal: 6013 mg/kg - Acute Dermal Toxicity Estimate for the mixture	LC50 Inhalation: No data is available
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COMPONENT TOXICITY DATA:

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Calcium chloride 10043-52-4	1000 mg/kg (Rat)	2630 mg/kg (Rat)	-----
Potassium Chloride 7447-40-7	2600 mg/kg (Rat)	-----	-----
Sodium Chloride 7647-14-5	3 g/kg (Rat)	10 g/kg (Rabbit)	42 g/m ³ (1 hr-Rat)

POTENTIAL HEALTH EFFECTS:

- Eye contact:** May cause serious eye irritation. May cause slight corneal injury. Effects may be slow to heal.
- Skin contact:** Brief contact is essentially nonirritating to skin. Prolonged contact may cause skin irritation, even a burn. May cause more severe response if skin is damp, abraded (scratched or cut), or covered by clothing, gloves, or footwear. Not classified as corrosive to the skin according to DOT guidelines.
- Inhalation:** Vapors are unlikely due to physical properties. Mist may cause irritation to upper respiratory tract (nose and throat).

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- Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation or ulceration.
- Chronic Effects:** Chronic exposures to calcium chloride that cause irritation may cause a chronic dermatitis or mucosal membrane problem. For the minor component(s):
POTASSIUM CHLORIDE: In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, heart, and kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. SODIUM CHLORIDE: Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

SIGNS AND SYMPTOMS OF EXPOSURE:

Solution and or solids may be visible on the skin and or eyes. Localized redness, warmth, and irritation consistent with mechanism of injury: abrasion, burn, hypertonic solution. Corneal eye pain, redness, acute corneal thickening or whitening. Tear production or conjunctivitis. Nasal mucosal and oropharyngeal erythema. Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.

Inhalation (Breathing): Inhaling mist, spray, or vapor may cause irritation to upper respiratory tract (nose and throat).

Skin: Skin Irritation: Skin exposure may cause slight irritation, redness, itching, swelling. May cause more severe response if skin is damp, abraded (scratched or cut), or covered by clothing, gloves, or footwear. Prolonged contact may cause more severe symptoms. Damage is localized to contact areas.

Eye: Eye Irritation: Eye exposure may cause serious eye irritation and pain. May cause conjunctival swelling and cornea opacification from hypertonic solution.

Ingestion (Swallowing): Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.

CHRONIC TOXICITY:

For the minor component(s): Potassium chloride - In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, Heart, and Kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys. Chronic exposures of calcium chloride to skin and mucous membranes that cause irritation may cause a chronic dermatitis or mucosal membrane problem.

Interaction with Other Chemicals Which Enhance Toxicity: None known

GHS HEALTH HAZARDS:

GHS: ACUTE TOXICITY - ORAL: Not classified as acutely toxic for oral exposure

GHS: CONTACT HAZARD - SKIN: Category 2 - Causes skin irritation

GHS: CONTACT HAZARD - EYE: Category 2A - Causes serious eye irritation

GHS: CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.

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MUTAGENIC DATA:

Not classified as a mutagen per GHS criteria. The data presented are for the following material: Calcium chloride (CaCl₂) - In vitro genetic toxicity studies were negative. The data presented are for the following material: Potassium chloride - In vitro genetic toxicity studies were positive. However, the relevance of this to humans is unknown. For the minor component(s): Sodium chloride - In vitro genetic toxicity studies were predominantly negative.

DEVELOPMENTAL TOXICITY:

Not classified as a developmental or reproductive toxin per GHS criteria. For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:**Aquatic Toxicity:**

Material is practically non-toxic to aquatic organisms on an acute basis. (LC₅₀/EC₅₀/EL₅₀/LL₅₀ >100 mg/L in the most sensitive species tested).

Freshwater Fish Toxicity:

Calcium Chloride: LC₅₀, bluegill (*Lepomis macrochirus*): 8,350 - 10,650 mg/l

Potassium Chloride: LC₅₀, rainbow trout (*Oncorhynchus mykiss*), 96 h: 4,236 mg/l

Sodium Chloride: LC₅₀, fathead minnow (*Pimephales promelas*): 10,610 mg/l

Invertebrate Toxicity:

Calcium Chloride: LC₅₀, water flea *Daphnia magna*: 759 - 3,005 mg/l

Potassium Chloride: EC₅₀, water flea *Daphnia magna*, 24 h, immobilization: 590 mg/l

LC₅₀, water flea *Ceriodaphnia dubia*, 96 h: 3,470 mg/l

Sodium Chloride: LC₅₀, water flea *Daphnia magna*: 4,571 mg/l

Other Toxicity:

Sodium Chloride: IC₅₀, OECD 209 Test; activated sludge, respiration inhibition: > 1,000 mg/l

FATE AND TRANSPORT:

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: Calcium chloride is believed not to persist in the environment because it is readily dissociated into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into water in the form of calcium and chloride ions. Calcium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions originally exist in nature, and their concentrations in surface water will depend on various factors, such as geological parameters, weathering, and human activities.

BIOCONCENTRATION: No bioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (K_{oc} between 0 and 50). Partitioning from water to n-octanol is not applicable.

BIOACCUMULATIVE POTENTIAL: Calcium chloride and its dissociated forms (calcium and chloride ions) are ubiquitous in the environment. Calcium and chloride ions can also be found as constituents in organisms. Considering its dissociation properties, calcium chloride is not expected to accumulate in living organisms.

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MOBILITY IN SOIL: Calcium chloride is not expected to be absorbed in soil due to its dissociation properties and high water solubility. It is expected to dissociate into calcium and chloride free ions or it may form stable inorganic or organic salts with other counter ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

13. DISPOSAL CONSIDERATIONS

Waste from material:

Reuse or reprocess, if possible. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Report spills if applicable. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Landfill and waste water treatment system.

Container Management:

Dispose of container in accordance with applicable local, regional, national, and/or international regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT**U.S. DOT 49 CFR 172.101:****Status:** Not regulated

* **NOTE:** This product is not classified as corrosive to the skin according to DOT guidelines.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**Status:** Not regulated**MARITIME TRANSPORT (IMO / IMDG)** Not regulated**Status - IMO / IMDG:** Not Regulated

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15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

SARA EHS Chemical (40 CFR 355.30)

Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Acute Health Hazard

EPCRA SECTION 313 (40 CFR 372.65):

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is not subject to export notification.

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

STATE REGULATIONS

There are no applicable state regulations for this product or its components.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS - Classifications of Substances:

- D2B - Poisonous and Infectious Material; Materials causing other toxic effects - Toxic material

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16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 17-Jul-2012

Disclaimer:

We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

NOTE: This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)**Health Rating: 2****Flammability Rating: 0****Reactivity Rating: 0****NFPA 704 - Hazard Identification Ratings (SCALE 0-4)****Health Rating: 1****Flammability: 0****Reactivity Rating: 0****Reason for Revision:**

- Three year review
- Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Updated the (M)SDS header
- Format change to sections: 2, 4, 5, 6, 7, 9, 10, 11, 13
- Product Identifier has been added or updated: SEE SECTION 1
- Updated Uses Advised Against information: SEE SECTION 1
- Revised Hazard(s) Identification information: SEE SECTION 2
- Added OSHA Status: SEE SECTION 2
- Emergency Overview was revised: SEE SECTION 2
- Revised Major Health Hazards: SEE SECTION 2
- Added GHS Information: SEE SECTION 2
- Added synonym(s): SEE SECTION 3
- Updated First Aid Measures: SEE SECTION 4
- Modified Fire Fighting Measure Recommendations: SEE SECTION 5
- Revised Accidental Release Measures: SEE SECTION 6
- Revised Handling and Storage Recommendations: SEE SECTION 7
- Updated Physical and Chemical Properties. SEE SECTION 9
- Stability and Reactivity recommendations: SEE SECTION 10
- Toxicological Information has been revised: SEE SECTION 11
- Updated Disposal Considerations. SEE SECTION 13
- Regulatory Information Changes: SEE SECTION 15

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IMPORTANT:

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

End of Safety Data Sheet