

635 SOUTH ELMWOOD AVENUE
P.O. BOX 4076
DAVENPORT, IOWA 52808
EMERGENCY PHONE 563-324-3381

Material Safety Data Sheet

Effective date: 8/14/2007

Print date: 8/14/2007

NFPA: Health 1, Fire 0, Reactivity 0

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1. INGREDIENTS:

CHEMICAL NAME:

Calcium Chloride
Alkali Degraded Sugar Beet Extract

Water

CAS#:

010043-52-4
U.S Patent No. 7,473,379
Foreign Patent Pending
7732-18-5

2. FIRST AID:

EYES: Flush with flowing water immediately and continuously for 5 minutes. Remove contact lenses, if present, and rinse another 15 minutes. Consult medical personnel without delay, preferably from an ophthalmologist.

SKIN: Wash off with cold flowing water or shower.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air if effects occur. Consult medical personnel.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment based on judgment of the physician in response to reactions of the patient.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: N/A
FLAMMABLE LIMITS: N/A
EXTINGUISHING MEDIA: Product does not burn.
FIRE & EXPLOSION HAZARDS: N/A

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing. Avoid contact with this material during fire fighting operations.

4. ACCIDENTAL RELEASE MEASURES:

See section 14 for Regulatory & Shipping Information.

PROTECT PEOPLE: Isolate area. Avoid contact with eyes and skin. May be a slipping hazard. Stop any leakage if it can be done safely. Wash exposed body areas thoroughly after handling. For appropriate safety equipment see section 7 below.

PROTECTING THE ENVIRONMENT:
SMALL/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.

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CLEAN UP: Spilled material may cause a slipping hazard. Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate PPE's. See section 6 for more information.

5. SAFE HANDLING AND STORAGE PRECAUTIONS:

HANDLING: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Refer to Exposure Controls/Personal Protection, Section 6 of this MSDS.

STORAGE: Keep containers tightly closed when not in use.

6. EXPOSURE CONTROLS/PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guidelines. If respiratory protection is required, use an approved air purifying respirator.

INGESTION: Use good personal hygiene. Do not consume or store food in a work area. Wash hands before smoking or eating.

EXPOSURE GUIDELINES:

Calcium Chloride:

Dow IHGTWA 10mg/m³

Sodium Chloride:

Dow IHG TWA 10mg/m³

PROTECTIVE CLOTHING:

Use protective clothing imperious to this material. Selection of specific items such as face shield, gloves, boots, apron or full body suit will depend on operations. Remove contaminated clothing immediately, wash skin area with soap and running cold water. Launder any contaminated clothing before reuse.

EYE PROTECTION:

Wear a face shield, safety glasses or chemical goggles.

7. PHYSICAL DATA:

BOILING POINT:

110 - 112°C @ 760 mmHg

VAPOR PRESSURE

9 – 15 mmHg @ 25°C

VAPOR DENSITY

Same as water

SPECIFIC GRAVITY

1.275 -1.439

SOLUBILITY IN WATER

Very Soluble

FREEZE POINT

Concentration Dependent

APPEARANCE

Clear Liquid

ODOR

Odorless

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8. STABILITY & REACTIVITY DATA:

PRODUCT STABILITY:	Stable
CHEMICAL INCOMPATIBILITY:	Avoid contact with: Sulfuric acid. Corrosive to some metals. Avoid contact with metals such as: Brass, ferrous metals, mild steel. Flammable hydrogen may be generated from contact with metals such as: Zinc.
HAZARDOUS DECOMPOSITION PRODUCTS:	Does not decompose.
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID:	None known.

9. TOXICOLOGICAL PROPERTIES

See section 2 for potential health effects. For detailed toxicological data, call the non-emergency number shown in header.

SKIN:	The dermal LD50, Rabbit: >5,000 mg/kg.
INGESTION:	Single dose oral LD50, Rat: 900 – 2,100 mg/kg.
MUTAGENICITY:	For calcium chloride in-vitro studies, the mutagenesis studies were negative. For potassium chloride In vitro genetic toxicity studies were positive. However, the relevance of this to humans is unknown.

10. ECOLOGICAL INFORMATION

CHEMICAL FATE

Data for Component: CALCIUM CHLORIDE MOVEMENT & PARTITIONING	No bio concentration is expected because of the relatively high water solubility. Partitioning from water to n-octanol is not applicable
PRESISTENCE & DEGRADABILITY	Biodegradation is not applicable.
Data for Component: Potassium Chloride MOVEMENT & PARTITIONING	Partitioning from water to n-octanol is not applicable.
PRESISTENCE & DEGRADABILITY	Biodegradation is not applicable.
Data for Component: Sodium Chloride MOVEMENT & PARTITIONING	No bio concentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high. Partitioning from water to n-octanol is not applicable
PRESISTENCE & DEGRADABILITY	Biodegradation is not applicable.

ECOTOXICITY

Data for Component: **CALCIUM CHORIDE**

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

Fish Acute & Prolonged Toxicity

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

LC50, mosquito fish (*Gambusia affinis*): 13,400 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea (*daphnia magna*): 759 – 3005 mg/l

Toxicity to Micro-organisms

EC50; activated sludge, respiration inhibition: >1,000 mg/L

Data for Component: **POTASSIUM CHLORIDE**

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

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*): 4,236 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea (*daphnia magna*) immobilization: 590 mg/l

LC50, water flea (*ceriodaphnia dubia*): 3,470 mg/l

Data for Component: **SODIUM CHLORIDE**

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

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*pimephales promelas*) 10,610 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea (*daphnia magna*): 4,571 mg/l

LC50, water flea (*ceriodaphnia dubia*): 924 – 4,205 mg/l

Toxicity to Micro-organisms

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

EC50; activated sludge, respiration inhibition: >1,000 mg/l

11. ENVIRONMENTAL AND DISPOSAL INFORMATION: (See Section 14 for Regulatory Information)

DISPOSAL:

DO NOT DUMP into any sewer systems, on the ground, or into any body of water. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

Ossian, Inc. has no control over the management practices or 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 MSDS section 1.

FOR UNUSED & UNCONTAMINATED PRODUCT:

Send to a licensed and/or permitted: re claim, landfill, or waste water treatment facility.

13. TRANSPORT INFORMATION:

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DOT Non – Bulk	Not Regulated
DOT Bulk	Not Regulated
IMDG	Not Regulated
ICAO/IATA	Not Regulated

14. REGULATORY & SHIPPING DATA: (Not meant to be all-inclusive- selected regulations represented)
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OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Section 313 – To our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

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

Pennsylvania (Worker and Community Right-To-Know): Pennsylvania Special Hazardous Substances List:

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

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund. Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
An immediate health hazard due to possible effects on the eyes.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory. See section 1.

CANADIAN REGULATIONS

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WHMIS INFORMATION:

The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D2B – eye or skin irritant (See sections 4 & 5) Refer to employer's workplace education program.

CPR STATEMENT:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

15. SUPPLIER INFORMATION:

Ossian, Inc. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Ossian makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Ossian's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.