

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

Material Safety Data Sheet

Effective date: 8/3/2006

Print date: 8/3/2006

NFPA: Health 1, Fire 0, Reactivity 0

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1. INGREDIENTS:

CHEMICAL NAME:

Calcium Chloride in solution

Urea in solution

U.S. Patent# 7,122,127

Degraded – Desugared Beet Molasses

CAS#:

010043-52-4

000057-13-6

Not Available

2. HEALTH HAZARD DATA:

- EYES:** May cause severe eye irritation and/or slight corneal injury. Effects may be slow to heal.
- SKIN CONTACT:** Brief contact is essentially nonirritating to the skin. May cause more severe response of skin is abraded or if product becomes trapped under clothing or PPE's. Prolonged contact may cause skin to burn with symptoms to include: pain, local redness, swelling with possible tissue damage.
- SKIN ABSORPTION:** Short single exposures are not likely to cause significant skin irritation or result in the material being absorbed through the skin in harmful amounts.
- INGESTION:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling are not likely to cause injury. If swallowed in larger amounts, gastrointestinal irritation, nervous system depression, drowsiness, slow reflexes and slurred speech may occur.
- INHALATION:** Slight irritation of the mucous membrane in the nose and/or throat could occur if product is inhaled over a prolonged period of time.

3. FIRST AID:

- EYES:** Flush with flowing water immediately and continuously for 15 minutes; remove contact lenses, if present. Consult medical personnel.
- SKIN:** Wash off with plenty of soap and water. If material penetrates through clothing, immediately remove contaminated clothing and flush the skin with water. If irritation persists after washing, seek medical attention.
- INGESTION:** If swallowed, seek medical attention and do not induce vomiting unless directed to do so by the physician.
- INHALATION:** Remove to fresh air. If effects occur as stated in section 2, consult medical personnel if necessary.
- NOTE TO PHYSICIAN:** If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

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4. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: N/A

FLAMMABLE LIMITS: N/A

EXTINGUISHING MEDIA: Product does not burn. If exposed to fire from another source, use suitable extinguishing agent for the fire.

FIRE & EXPLOSION HAZARDS: Under fire conditions some components of this product may decompose and produce unidentified toxic and/or irritating compounds. This may include but is not limited to: ammonia, ammonium cyanate, carbon dioxide and carbon monoxide. Hypochlorite bleach reacts with urea to form nitrogen tri-chloride which explodes spontaneously in air.

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing.

5. 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 SPILLS: Incorrect application of this product from its intended uses is not expected to be harmful to the environment.

CLEAN UP: Contain spill if possible and absorb with sand. Collect material in a suitable and properly labeled container and flush area with plenty of water.

LARGE SPILLS: Avoid contamination of drinking water, natural water ways, or ground water supply. Incorrect application of this product from its intended use is not expected to be harmful to the environment.

CLEAN UP: Dike spill and transfer to suitable and properly labeled containers via vacuum or saturated sand. Flush residue with plenty of water.

6. SAFE HANDLING AND STORAGE PRECAUTIONS:

HANDLING: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. See section 7 below for exposure controls and personal protection.

Refer to Exposure Controls/Personal Protection, Section 7 of this MSDS.

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STORAGE:

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Keep containers tightly closed when not in use. Avoid containers, piping or fittings made of brass, bronze, or other copper-bearing alloys, and galvanized metal.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION:

VENTILATION:	Provide general and/or local exhaust ventilation to control smell.
RESPIRATORY PROTECTION:	Atmospheric levels should be maintained below the exposure guidelines. If respiratory protection is required, use an approved air particulate respirator.
EXPOSURE GUIDELINES:	
Urea:	AIHA WEEL is 10mg/m ³
Calcium chloride:	Dow IHG is 10mg/m ³
PROTECTIVE CLOTHING:	Use protective clothing imperious to this material. Selection of specific items such as gloves, boots, apron or full body suit will depend on operations. Remove contaminated clothing immediately, wash skin area with soap and running water. Launder any contaminated clothing before reuse.
EYE PROTECTION:	Wear a face shield, safety glasses or chemical goggles.

8. PHYSICAL DATA:

MELTING POINT:	N/A
BOILING POINT:	N/A
DENSITY	1.331 g/cm ³
SPECIFIC GRAVITY	1.334
SOLUBILITY IN WATER	Infinite
EVAPORATION RATE	N/A
APPEARANCE	Amber colored liquid
ODOR	Ammonia

9. STABILITY & REACTIVITY DATA:

PRODUCT STABILITY:	Thermally stable at typically used temperatures.
CHEMICAL INCOMPATIBILITY:	May be corrosive to some metals over an extended period of time.
HAZARDOUS DECOMPOSITION PRODUCTS:	Hazardous decomposition depends upon temperature, air supply and the presence of other materials. Hazardous decomposition products may include and are limited to: ammonia.
HAZARDOUS POLYMERIZATION:	Will not occur.
OXIDIZER:	N/A

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10. TOXICOLOGICAL PROPERTIES

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

SKIN: For the major component: The dermal LD50, Rabbit, > 5,000 mg/kg

INGESTION: For the major component: The dermal LD50, Rat:900-2,100mg/kg

The data presented are for the following material: Calcium Chloride or CaCl₂.
In vitro studies were negative.

11. 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
Biodegradation is not applicable.

PRESISTENCE & DEGRADABILITY

Data for Component: UREA
MOVEMENT & PARTITIONING

No bio concentration is expected because of the relatively high water solubility. Partitioning from water to n-octanol is not applicable.
Biodegradation is not applicable.

PRESISTENCE & DEGRADABILITY

ECOTOXICITY

Data for Component: CALCIUM 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, bluegill (*Lepomis macrochirus*): 8,350 – 10,650 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: UREA
Not Available

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

DISPOSAL:

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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:

UNITED STATES DOT INFORMATION:

This product is not regulated by D.O.T. when shipped domestically by land.

CANADIAN TDG INFORMATION:

This product is not regulated by T.D.G. when shipped domestically by land.

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

D.O.T. PROPER SHIPPING NAME:	N/A
HAZARDOUS SUBSTANCE 49CFR CERCLA:	N/A
D.O.T. HAZARD CLASS	N/A
D.O.T. LABELS REQUIRED	N/A
D.O.T. PLACARDS REQUIRED	N/A

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 CATERGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 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.

STATE RIGHT-TO-KNOW:

This product is not known to contain any substances subject to the disclosure requirements of: New Jersey, Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

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This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and has been registered as such due to the possible effects on the eyes.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

CANADIAN REGULATIONS

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.

HAZARDOUS PRODUCTS ACT INFORMATION:

This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14)

<u>COMPONENTS:</u>	<u>CAS#</u>
Calcium Chloride	010043-52-4

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.