



## MATERIAL SAFETY DATA SHEET

Remdal Eco-Safe Ice Melter

MSDS Date of Issue: 6/18/11

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Remdal Eco-Safe Ice Melter

**MANUFACTURER / DISTRIBUTOR:** TerraLink Horticulture Inc.  
**ADDRESS:** 464 Riverside Road, Abbotsford, BC. Canada V2S 7M1  
**PHONE:** 604-864-9044

**24 HOUR CEDA EMERGENCY PHONE:** 604-540-4100  
**CHEMICAL SPILLS:** 800-663-3456

**PRODUCT USE:** Fertilizer  
**PREPARED BY:** Regulatory Affairs  
**REVISION DATE:** January 18, 2011

### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENT(S)</u>	<u>CAS NO.</u>	<u>EXPOSURE LIMITS</u>	
		<u>OSHA PEL-TWA</u>	<u>% VOL/WT</u>
Potassium Chloride	7447-40-7		95 - 99.5
Sodium Chloride	7647-14-5		0.3 - 3.7
Calcium and Magnesium Chlorides and Sulfates CAS No. Various			0.2 - 1.3

### SECTION 3: HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

#### CAUTION: KEEP OUT OF REACH OF CHILDREN

**Eye:** Contact may cause mild eye irritation including stinging, watering and redness.

**Skin:** Contact may cause mild irritation including redness and a burning sensation. No information available on skin absorption.

**Inhalation (Breathing):** No information available.

**Signs and Symptoms:** Effects of overexposure may include irritation of the nose, throat and digestive tract, nausea, vomiting, diarrhea, abdominal cramping, irregular heartbeats (arrhythmias), dehydration, and hypertension. Repeated overexposure to dusts may result in irritation of the respiratory tract, coughing and shortness of breath.

**Cancer:** Inadequate data available to evaluate the cancer hazard of this material.

**Target Organs:** No data available.

**Developmental:** Inadequate data available for this material.

**Other Comments:** None.

**Pre-Existing Medical Conditions:** Conditions aggravated by exposure may include kidney disorders and high blood pressure (hypertension).



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### SECTION 4: FIRST AID MEASURES

**EYES:** Do not let victim rub eyes. Immediately flush eye(s) with lukewarm, gently running water for at least 20 minutes while holding the eyelid(s) open. If irritation persists, obtain medical advice.

**SKIN:** Flush with lukewarm, gently flowing water until the chemical is removed. Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts, etc.). Obtain medical attention if pain or irritation develops or persists. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

**INGESTION:** If large amounts are swallowed, seek emergency medical attention. If victim is drowsy or unconscious and vomiting, place on left side with the head down and do not give anything by mouth. If victim is conscious and alert and ingestion occurred within the last hour, vomiting should be induced for ingestion of large amounts (more than 5 ounces or a little more than 1/2 cup in an adult) preferably under direction from a physician or poison center. If possible, do not leave victim unattended and observe closely for adequacy of breathing.

**INHALATION:** If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

### SECTION 5: FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Does not burn. Use extinguishing media for surrounding fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** Positive pressure, self contained breathing apparatus is required for all fire fighting activities involving hazardous materials. Full structural fire fighting (bunker) gear is the minimum acceptable attire. The need for proximity, entry, flashover and/or special chemical protective clothing (see Section 8) needs to be determined for each incident by a competent fire fighting safety professional. Water used for fire suppression and cooling may become contaminated.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** No unusual fire or explosion hazards are expected. When this material is subjected to high temperatures, it may release small amounts of chloride gas.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known for blend.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** Muriate of Potash is a crop nutrient and plant food however, large spills can harm or kill vegetation. Stay upwind and away from spill (dust hazard). Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways.

Notify appropriate federal, state, and local agencies as may be required (see Section 13). Minimize dust generation. Sweep up and package appropriately for disposal.

**SECTION 6 NOTES:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

### SECTION 7: HANDLING AND STORAGE

**HANDLING AND STORAGE:** The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8). Wash thoroughly after handling. Wash contaminated clothing. Use good personal hygiene practice. Keep container(s) tightly closed. When possible use and store this material in cool, dry, well ventilated areas. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

**OTHER PRECAUTIONS:** May be toxic to fish and other aquatic organisms. Do not contaminate water supplies by handling and storage of product. Drift or runoff may adversely affect aquatic invertebrates and non-target plants.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING / VENTILATION CONTROLS:** Use local exhaust ventilation to control dust or mist. Supply sufficient replacement air to make up for air removed by exhaust system, process of personnel enclosure and control of process conditions.

**RESPIRATORY PROTECTION:** A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2). Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator.

**EYE PROTECTION:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

**SKIN PROTECTION:** The use of cloth or leather work gloves is advised to prevent skin contact, possible irritation and absorption (see glove manufacturer literature for information on permeability).

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** White to reddish-brown, crystalline or granular

**ODOUR:** Odourless

**PHYSICAL STATE:** Solid

**pH AS SUPPLIED:** 5.4 - 10.0 in a 5% solution

**pH (Other):** NA

**BOILING POINT:** Sublimes at 1,500°C (2,732°F)

**MELTING / FREEZING POINT:** 772 to 776°C (1423 to 1428°F)

**VAPOR PRESSURE (mmHg):** Approximately zero

**VAPOR DENSITY (AIR = 1):** 2.57

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.986 - 1.990

**EVAPORATION RATE:** NA

**BASIS (=1):** NA

**SOLUBILITY IN WATER:** 99.5 - 99.999%; 34.2 g/100mL at 20°C

**PERCENT SOLIDS BY WEIGHT:** NA

**PERCENT VOLATILE:** NA

**VOLATILE ORGANIC COMPOUNDS (VOC):** NA

**WITH WATER:** NA **LBS/GAL**

**WITHOUT WATER:** NA **LBS/GAL**

**MOLECULAR WEIGHT:** KCl - 74.6; NaCl - 58.5

**VISCOSITY:** NA

### SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Stable under normal conditions of storage and handling. Material is hygroscopic (May absorb moisture from air when relative humidity >72%).

**CONDITIONS TO AVOID (STABILITY):** None known

**INCOMPATIBILITY (MATERIAL(S) TO AVOID):** Avoid contact with hot nitric acid, may cause evolution of toxic nitrosyl chloride. Contact with other strong acids may produce irritating hydrogen chloride gas. KCl may react violently with bromine trifluoride and may explode if mixed with potassium permanganate and sulfuric acid. NaCl can react with most noble metals, such as iron or steel, building materials (such as cement), bromine, or trifluoride. A potentially explosive reaction may occur if NaCl is mixed with dichloromaleic anhydride and urea. Electrolysis of mixtures containing NaCl and nitrogen compounds may form explosive nitrogen trichloride.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** None known

**HAZARDOUS POLYMERIZATION:** Will not occur.



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### SECTION 11: TOXICOLOGICAL INFORMATION

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#### TOXICOLOGICAL INFORMATION:

**Potassium Chloride:** LD50 (rat, oral) = 2.6 g/kg; LD50 (mouse, oral) = 1.5 g/kg  
LC50: no information available  
Eye (rabbit): 500 mg/24 H, mild irritant  
Inadequate carcinogenicity, mutagenicity, or developmental toxicity data located for potassium chloride. No target organ data located for potassium chloride.

**Sodium Chloride:** LD50 (rat, oral) = 3 g/kg; LD50 (mouse, oral) = 4 g/kg  
LC50 (rat) >42 g/m<sup>3</sup> / 1 hour  
Eye (rabbit): 100 mg/24 hour, moderate irritant  
Eye (rabbit): 500 mg/24 hour, mild irritant  
Inadequate carcinogenicity, mutagenicity, or developmental toxicity data located for sodium chloride. No target organ data located for sodium chloride.

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### SECTION 12: ECOLOGICAL INFORMATION

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#### ECOLOGICAL INFORMATION:

Dissolution of large quantities of potassium chloride and sodium chloride in water may create an elevated level of salinity that may be harmful to fresh water aquatic species and to plants that are not salt-tolerant.

**Potassium Chloride:**  
Lepomis macrochirus LC50 - 2010 mg/l  
Physa heterostrapha LC50 - 940 mg/l  
Scenedesmus subspicatus EC50 - 2500 mg/l

**Sodium Chloride:**  
Ceriodaphnia dubia LC50 - 280,000 - 3,540,000 ug/l  
Daphnia magna LC50 - 3,144,000 - 10,000,000 ug/l  
Daphnia pulex EC50 - 56.40 mM  
Pimephales promelas LD50 - 6,020,000 - 10,000,000 ug/l

Drift or runoff may adversely affect non-target plants. Do not apply directly to water. Do not contaminate water when disposing of equipment wash water. Do not apply when weather conditions favour drift from target area.

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### SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHOD:** This material, if discarded as produced, is not an RCRA "listed" or "characteristic" hazardous waste. Contamination may subject it to hazardous waste regulations. Properly characterize all waste materials. Dispose of according to local, provincial and federal government requirements.

**RCRA HAZARD CLASS:** NA

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### SECTION 14: TRANSPORT INFORMATION

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**CANADIAN TDG DESCRIPTION (Road and Rail):** Not listed in the hazardous materials shipping regulation (49 CFR, Table 172.101) by the U.S. Department of Transportation, or in the Transport of Dangerous Goods (TDG) regulations in Canada.



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**SECTION 15: REGULATORY INFORMATION**

<p><b>FDA:</b></p> <p><b>CERCLA:</b>  <b>RCRA 261.33:</b>  <b>SARA 302:</b> RQ: No; TPQ: No  <b>SARA Title III:</b></p> <p><b>SARA 313 List: No</b>  <b>TSCA:</b>  <b>Proposition 65:</b>  (CA Health and Safety Code Section 25249.5)  <b>NTP, IARC, OSHA:</b>  <b>Canada DSL:</b>  <b>Canada NDSL:</b>  <b>WHMIS:</b></p>	<p>1. Potassium Chloride used as a dietary supplement in food for human consumption is generally recognized as safe (GRAS) when used in accordance with good manufacturing practice [21 CFR 182.5622].  2. Substance added directly to human food affirmed as GRAS [21 CFR 184.1622].</p> <p>Not listed  Not listed</p> <p><b>SARA 311/312:</b> Acute: No; Chronic: No; Fire: No; Pressure: No; Reactivity: No - Exemptions at 40 CFR, Part 370 may apply for agricultural use, or quantities of less than 10,000 pounds on site.</p> <p>8 (b) Chemical Inventory: Yes; TSCA 8 (d): No  Warning: This product contains substances that are known to the State of California to cause cancer and/or reproductive harm.</p> <p>This material has not been identified as a carcinogen by NTP, IARC, or OSHA.  Yes  No  Not controlled</p>
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**SECTION 16: OTHER INFORMATION**

**ADDITIONAL INFORMATION:**  
Abbreviations used throughout the MSDS are:

NA = Not available
NAb = Not available for blend
NAp = Not applicable
N/E = None established

Company references utilized in preparation of the MSDS.

**DISCLAIMER:**  
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