



# ZIRCON INDUSTRIES, INC.

www.liquidheat.com  
www.directchem.com

P.O. Box 22483  
Cleveland, Ohio 44122  
216/581-7570  
FAX 216/581-2868  
1-800-547-4328  
e-mail: staff@liquidheat.com

## SAFETY DATA SHEET

---

### 1. Product And Company Identification

---

Product Identifier: Ice Breaker Green

Manufacturer: Zircon Industries, Inc.  
4920 Commerce Parkway – Suite 9  
Cleveland, Ohio 44128  
(216) 595-0200

Recommended use: Surface Deicer

Recommended restrictions: None known

Emergency: (800) 535-5053

---

### 2. Hazards Identification

---

Physical hazards Not classified

Health hazards Not classified

Environmental hazards Not classified

OSHA-defined hazards Not classified

Label elements

Hazard symbol None

Signal word None

Hazard statement The substance does not meet the criteria for classification

Precautionary statement

Prevention Observe good industrial hygiene practices

Response Wash hands after handling

Storage Store away from incompatible materials

Disposal Dispose of waste and residues in accordance with local authority requirements

Hazard(s) not otherwise

Classified (HNOC) None known

Supplemental information Not applicable

---

### 3. Composition/Information on Ingredients

---

Ingredient	CAS#	LD50	LC50
Magnesium Chloride Hexahydrate	7791-18-6	None	None
Carbohydrate Complex Corrosion Inhibitor	N/A		
Water	7732-18-5		

#### Mixture

Composition comments The criteria for listing components in this section are: Carcinogens, Respiratory Sensitizers, Mutagens, Teratogens and Reproductive toxins are listed when present at 0.1% or greater; components which are otherwise hazardous according to WHMIS/OSHA are listed when present at 1.0% or greater. Non-hazardous components are not listed. The products pertaining to this SDS have various proportions of components which do not meet the listing criteria.

---

### 4. First-Aid Measures

---

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically
General information	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

---

## 5. Fire Fighting Measures

---

Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Hydrogen chloride. Chlorine gas. Oxides of magnesium.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

---

## 6. Accidental Release Measures

---

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

---

## 7. Handling and Storage

---

Precautions for safe handling	Avoid contact with eyes, skin and clothing. Use good industrial hygiene practices in handling this material.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a cool, dry and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

---

## 8. Exposure Controls/Personal Protection

---

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	<p>TWA PEL: No specific limits have been established for magnesium chloride (a soluble substance). As a guideline, OSHA (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 5mg/cu.m. Respirable Dust 8-Hour TWA PEL, 15mg/cu.m. Total Dust 8-Hour TWA PEL.</p> <p>TWA TLV: No specific limits have been established for magnesium chloride (a soluble substance). As a guideline, ACGIH (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insolubles) Not Otherwise Classified (PNOC): 10mg/cu.m. Inhalable Particulate 8-Hours TWA TLV, 3mg/cu.m. Respirable Particulate TWA TLV.</p> <p>Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If user operations generate dust, fumes, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.</p>
Individual protection measures, such as personal protective equipment	
Eye/face protection	Safety glasses

<b>Skin protection</b>	
<b>Hand protection</b>	Rubber gloves. Confirm with a reputable supplier first.
<b>Other</b>	As required by employer code.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator or NIOSH-approved filtering facepiece.
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

---

## 9. Physical and Chemical Properties

---

<b>Appearance</b>	Liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Crystalline.
<b>Color</b>	Green
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not available.
<b>pH</b>	7 - 9 (5% solution)
<b>Melting point/freezing point</b>	-1 °F (-18.33 °C) (30% solution, periodically mixed to ensure homogeneity)
<b>Initial boiling point and boiling range</b>	Not applicable
	225 °F (107.22 °C)
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	1.24 - 1.34 (H <sub>2</sub> O = 1)
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in cold water, hot water, methanol, acetone.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

---

## 10. Stability and Reactivity

---

<b>Reactivity</b>	Reactive with oxidizing agents, acids, metals in presence of moisture.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents. Metals.
<b>Hazardous decomposition products</b>	May include and are not limited to: Hydrogen chloride. Chlorine gas. Oxides of magnesium.

---

## 11. Toxicological Information

---

### Information on likely routes of exposure

<b>Ingestion</b>	Expected to be a low ingestion hazard.
------------------	--

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Not classified.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Exposure minutes</b>	Not available.
<b>Erythema value</b>	Not available.
<b>Oedema value</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Corneal opacity value</b>	Not available.
<b>Iris lesion value</b>	Not available.
<b>Conjunctival reddening value</b>	Not available.
<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not classified.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Teratogenicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.
<b>Chronic effects</b>	Not classified.
<b>Further information</b>	This product has no known adverse effect on human health.
<b>Name of Toxicologically Synergistic Products</b>	Not available.

---

## 12. Ecological Information

---

<b>Ecotoxicity</b>	May be harmful to freshwater aquatic species and to plants that are not saline tolerant.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Mobility in general</b>	Not available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

---

## 13. Disposal Considerations

---

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal Instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

#### 14. Transport Information

**U.S. Department of Transportation (DOT)**

Not regulated as dangerous goods.

**Transportation of Dangerous Goods (TDG - Canada)**

Not regulated as dangerous goods.

#### 15. Regulatory Information

**Canadian federal 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 status** Not Controlled

**US federal regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
 Delayed Hazard - No  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
 Not regulated.

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Total food additive  
 Direct food additive  
 GRAS food additive

**US state regulations**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**US. Rhode Island RTK**

Not regulated.

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Issue date**

16-January-2015

**Effective date**

15-January-2015

**Expiry date**

15-January-2018

**Further information**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

**Prepared by**

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

**Other information**

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.