Magnesium Chloride 51% w/v Solution

SECTION 1. Product and Company Identification

Product Name and Synonym: Magnesium Chloride 51% w/v Solution
Product Code: BDH3899
Material Uses: Aqua Solutions, Inc
6913 Hwy 225
Deer Park, TX 77536
(281) 479-2569
Entry Date: 12/18/2009
Print Date: 7/21/2010
24 Hour Emergency Assistance: Chemtrec 800-424-9300
Canutec 613-996-6666

SECTION 2. HAZARD IDENTIFICATION

MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE IRRITATING ON CONTACT WITH MUCOUS MEMBRANES. Avoid contact with skin and clothing. Wash thoroughly after handling.

Physical state: Liquid
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview:

CAUTION!
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION
MAY BE IRRITATING ON CONTACT WITH MUCOUS MEMBRANES

Avoid contact skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry: Inhalation. Ingestion

Potential acute health effects:

Eyes: Moderately irritating to eyes
Skin: Moderately irritating to the skin
Inhalation: Moderately irritating to the respiratory system
Ingestion: No known significant effects or critical hazards
Carcinogenic effects: No known significant effects or critical hazards
Mutagenic effects: No known significant effects or critical hazards
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

Medical conditions aggravated by over-exposure: Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. See toxicological information (section 11).

SECTION 3. MIXTURE COMPONENTS
### Magnesium Chloride 51% w/v Solution

<table>
<thead>
<tr>
<th>SARA 313</th>
<th>Component</th>
<th>CAS Number</th>
<th>Percent Comp.</th>
<th>Dimension</th>
<th>Exposure Limits</th>
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</thead>
<tbody>
<tr>
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<td>Magnesium Chloride Hexahydrate</td>
<td>CAS# 7791-18-6</td>
<td>51% W/W</td>
<td>TXDS: orl-rat LD₉₀: 8100 mg/Kg</td>
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<tr>
<td></td>
<td>Water, Deionized ASTM Type II</td>
<td>CAS# 7732-18-5</td>
<td>Balance W/W</td>
<td>None Established</td>
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</tbody>
</table>

### SECTION 4 FIRST AID MEASURES

May cause respiratory tract, eye and skin irritation. May be irritating on contact with mucous membranes. Avoid contact with skin and clothing. Wash thoroughly after handling.

**FIRST AID:**
- **SKIN:** Remove contaminated clothing. Wash exposed area with soap and water. If irritation persists, seek medical attention.
- **EYES:** Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.
- **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- **INGESTION:** Get medical attention if symptoms occur. Wash out mouth with water. Move exposed person to fresh air. If exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.

### SECTION 5 FIRE FIGHTING MEASURES

- **Fire Extinguisher Type:** Any means suitable for extinguishing surrounding fire
- **Fire / Explosion Hazards:** Negligible fire hazard when exposed to heat or flame
- **Fire Fighting Procedure:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

**Personal precautions:** Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up: If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

### SECTION 7 HANDLING AND STORAGE

Avoid contact with eyes, skin and clothing. Store away from incompatible materials. Keep container tightly closed. Store in a cool, dry, ventilated area.

### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory Protection:** None required
Magnesium Chloride 51% w/v Solution

Ventilation
- Local Exhaust ✔
- Mechanical □

Protective Gloves:
Gloves to prevent skin exposure as rubber or vinyl

Eye Protection:
Splash Goggles

Other Protective Equipment:
Wear appropriate clothing to prevent skin exposure
Consult local authorities for acceptable exposure limits.

Engineering measurers: No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.
Body recommended: lab coat and gloves

Respiratory: None required.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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<tr>
<th>Property</th>
<th>Value</th>
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<tr>
<td>Melting Point</td>
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</tr>
<tr>
<td>Boiling Point</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Vapor Density</td>
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<td>Solubility in Water</td>
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<td>Evaporation Standard</td>
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<td>Auto Ignition Temp</td>
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<tr>
<td>Lower Flamm. Limit in Air</td>
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</tr>
<tr>
<td>Upper Flamm. Limit in Air</td>
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</tbody>
</table>
SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability: Stable
Conditions to Avoid: None known
Materials to Avoid: Acids
Hazardous Decomposition Products: Toxic and corrosive fumes of chlorine
Hazardous polymerization: Will Not Occur
Conditions to Avoid: None known

SECTION 11 TOXICOLOGICAL INFORMATION

Toxicity data
Other toxic effects on humans:
Hazardous in case of skin contact (irritant) of eye contact (irritant), of ingestion, of inhalation (lung irritant).
Specific effects
Carcinogenic effects: No known significant effects or critical hazards
Mutagenic effects: No known significant effects or critical hazards
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards
Sensitization
Ingestion: No known significant effects or critical hazards
Inhalation: Moderately irritating to the respiratory system
Eyes: Moderately irritating to eyes
Skin: Moderately irritating to the skin

SECTION 12 ECOLOGICAL INFORMATION

Environmental precautions: No known significant effects or critical hazards.
Products of degradation: These products are halogenated compounds. Some metallic oxides.
Toxicity of the products of biodegradation: The products of degradation are more toxic than the product itself.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

SECTION 14 TRANSPORT INFORMATION

DOT Classification: Not Regulated
DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 REGULATORY INFORMATION

United States
HCS Classification: Irritating material
U.S. Federal regulations: TSCA 8(b) inventory. Listed
SARA 302/304/311/312 extremely hazardous substances: No products were found
SARA 302/304 emergency planning and notification: No products were found
SARA 302/304/311/312 hazardous chemicals: Magnesium Chloride
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Magnesium Chloride: Immediate (acute) health hazard
Clean Water Act (CWA) 307: No products were found
Clean Water Act (CWA) 311: No products were found
Clean Air Act (CAA) 112 accidental release prevention: No products were found
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found

State regulations: New Jersey: Magnesium Chloride Reagent, 51%
Canada
WHMIS (Canada): Not controlled under WHMIS (Canada).
CEPA DSL/CEPA NDSL: CEPA DSL: Water

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Flammability

0

Health

1

Reactivity

0

NFPA

Revisions

7/20/2010 0 Review date for MSDS. STN

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