**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

- **Product form**: Substance
- **Trade name**: MAGNESIUM CHLORIDE, HEXAHYDRATE
- **CAS No**: 7791-18-6
- **Product code**: AB01310
- **Formula**: MgCl2.6H2O

1.2. Relevant identified uses of the substance or mixture and uses advised against

- **Use of the substance/mixture**: Laboratory use/Manufacturing component/Research

1.3. Details of the supplier of the safety data sheet

AmericanBio, Inc.
15 Erie Dr.
Natick, MA 01760 - USA
T 800.443.0600 - F 508.655.2754
info@americanbio.com - www.americanbio.com

1.4. Emergency telephone number

- **Emergency number**: 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

- **Classification (GHS-US)**: Not classified

2.2. Label elements

- **GHS-US labeling**: No labeling applicable

2.3. Other hazards

- **No additional information available**

2.4. Unknown acute toxicity (GHS-US)

- **No data available**

**SECTION 3: Composition/information on ingredients**

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
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<tbody>
<tr>
<td>MAGNESIUM CHLORIDE, HEXAHYDRATE</td>
<td>(CAS No) 7791-18-6</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

3.2. Mixture

- **Not applicable**

**SECTION 4: First aid measures**

4.1. Description of first aid measures


- **First-aid measures after inhalation**: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact: Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.


4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact: Slight irritation.
Symptoms/injuries after eye contact: Slight irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: No unsuitable extinguishing media known. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: DIRECT FIRE HAZARD. Non combustible.
Explosion hazard: DIRECT EXPLOSION HAZARD. No direct explosion hazard.
Reactivity: On heating/burning: release of toxic and corrosive gases/vapours (chlorine, hydrogen chloride) and formation of metallic fumes. Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine).

5.3. Advice for firefighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions: Dilute toxic gases with water spray. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting: Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. Evacuate unnecessary personnel.
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.

01/05/2015 EN (English US) 2/7

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep only in the original container in a cool, well ventilated place away from: Direct sunlight. Keep container closed when not in use.
Incompatible products: Strong bases. strong acids.
Incompatible materials: Sources of ignition. Direct sunlight.
Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.
Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. metals. water/moisture.
Storage area: Store in a dry area. Keep out of direct sunlight. May be stored under argon. Meet the legal requirements.
Special rules on packaging: SPECIAL REQUIREMENTS: closing. watertight. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials: SUITABLE MATERIAL: cardboard. plastics.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Personal protective equipment: Avoid all unnecessary exposure.
Materials for protective clothing: GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC. nitrile rubber.
Hand protection: Gloves. Wear protective gloves.
Eye protection: Safety glasses. In case of dust production: protective goggles. Chemical goggles or safety glasses.
Skin and body protection: Protective clothing.
Respiratory protection: Dust production: dust mask with filter type P1. Wear approved mask.
Other information: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Appearance: Crystalline solid.
Molecular mass: 203.31 g/mol
Color: Colourless to white.
Odor: Odourless.
Odor threshold: No data available
pH: 5.0 - 6.5 (5 %)
pH solution: 5 %
Relative evaporation rate (butyl acetate=1): No data available
Melting point: 116 °C
Freezing point: No data available
MAGNESIUM CHLORIDE, HEXAHYDRATE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property/Property parameter</th>
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<td>Boiling point</td>
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</tr>
<tr>
<td>Flash point</td>
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</tr>
<tr>
<td>Self ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
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<td>Flammability (solid, gas)</td>
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<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
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</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Density</td>
<td>1569 kg/m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Soluble in ethanol. Water: 167 g/100ml Ethanol: 50 g/100ml</td>
</tr>
<tr>
<td>Log Pow</td>
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</tr>
<tr>
<td>Log Kow</td>
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</tr>
<tr>
<td>Viscosity, kinematic</td>
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<tr>
<td>Viscosity, dynamic</td>
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<tr>
<td>Explosive properties</td>
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<td>Oxidizing properties</td>
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</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>9.2. Other information</td>
<td></td>
</tr>
<tr>
<td>Minimum ignition energy</td>
<td>Not applicable</td>
</tr>
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<td>SADT</td>
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</tr>
<tr>
<td>Other properties</td>
<td>Hygroscopic. Substance has acid reaction.</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity

On heating/burning: release of toxic and corrosive gases/vapours (chlorine, hydrogen chloride) and formation of metallic fumes. Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine).

10.2. Chemical stability

Hygroscopic. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products


SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>MAGNESIUM CHLORIDE, HEXAHYDRATE (cf)7791-18-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
</tbody>
</table>
**Reproductive toxicity**: Not classified

**Specific target organ toxicity (single exposure)**: Not classified

**Specific target organ toxicity (repeated exposure)**: Not classified

**Aspiration hazard**: Not classified

**Potential Adverse human health effects and symptoms**: Based on available data, the classification criteria are not met.

**Symptoms/injuries after skin contact**: Slight irritation.

**Symptoms/injuries after eye contact**: Slight irritation.


### SECTION 12: Ecological information

#### 12.1. Toxicity

**Ecology - air**: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).


#### 12.2. Persistence and degradability

**MAGNESIUM CHLORIDE, HEXAHYDRATE (7791-18-6)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>16500 mg/l (96 h; Gambusia affinis; Anhydrous form)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>3190 mg/l (24 h; Daphnia magna; Anhydrous form)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>7700 mg/l (48 h; Leuciscus idus; Anhydrous form)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>1400 mg/l (24 h; Daphnia magna; Anhydrous form)</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms</td>
<td>5490 mg/l (1 h; Pseudomonas putida; Anhydrous form)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>480 mg/l (72 h; Scenedesmus subspicatus; Anhydrous form)</td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

**MAGNESIUM CHLORIDE, HEXAHYDRATE (7791-18-6)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>No bioaccumulation data available. Not established.</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

**Other information**: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**Waste disposal recommendations**: Precipitate/make insoluble. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment. Dispose in a safe manner in accordance with local/national regulations.

**Additional information**: Can be considered as non hazardous waste according to Directive 2008/98/EC.

**Ecology - waste materials**: Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations
### Additional information

<table>
<thead>
<tr>
<th>Other information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
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### ADR

<table>
<thead>
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<tr>
<td>Packing group (ADR)</td>
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<tr>
<td>Hazard identification number (Kemler No.)</td>
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<td>Classification code (ADR)</td>
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</table>

### Transport by sea

No additional information available

### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

**MAGNESIUM CHLORIDE, HEXAHYDRATE (7791-18-6)**

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

**CANADA**

No additional information available

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Other information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None.</td>
</tr>
</tbody>
</table>

### NFPA health hazard

1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

### NFPA fire hazard

0 - Materials that will not burn.

### NFPA reactivity

0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
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