SECTION 1: Identification

1.1. Identification

Product form: Substance
Substance name: Magnesium Sulfate Heptahydrate
CAS-No.: 10034-99-8
Formula: MgSO₄ • 7H₂O

1.2. Recommended use and restrictions on use

Use of the substance/mixture: Nutrient; Dietary Supplement; Pharmaceuticals

1.3. Supplier

Manufacturer: Jost Chemical Co.
Address: 8150 Lackland Rd.
Saint Louis, Missouri 63114
Phone: T 314-428-4300 - F 314-428-4366
Email: sds@jostchemical.com - www.jostchemical.com

1.4. Emergency telephone number

Emergency number: For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
United States and Canada: 1-800-424-9300 / +1 703-527-3887
Global: +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labeling
No labeling applicable

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: None, to our knowledge.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type: Mono-constituent

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Sulfate Heptahydrate (Main constituent)</td>
<td>(CAS-No.) 10034-99-8</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: If you feel unwell, seek medical advice.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Wash skin with plenty of water.
**Magnesium Sulfate Heptahydrate**

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**First-aid measures after eye contact**: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.

**First-aid measures after ingestion**: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Victim is fully conscious: immediately induce vomiting. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Call a poison center/doctor/physician if you feel unwell.

---

**4.2. Most important symptoms and effects (acute and delayed)**

<table>
<thead>
<tr>
<th>Potential Adverse human health effects and symptoms</th>
<th>Practically non-toxic if swallowed (LD50 oral, rat &gt; 2000 mg/kg). Slightly harmful in contact with skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>AFTER INHALATION OF DUST: Coughing. Slight irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>No effects known.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Slight irritation.</td>
</tr>
<tr>
<td>Chronic symptoms</td>
<td>No effects known.</td>
</tr>
</tbody>
</table>

---

**4.3. Immediate medical attention and special treatment, if necessary**

Treat symptomatically.

---

**SECTION 5: Fire-fighting measures**

**5.1. Suitable (and unsuitable) extinguishing media**


---

**5.2. Specific hazards arising from the chemical**

<table>
<thead>
<tr>
<th>Fire hazard</th>
<th>DIRECT FIRE HAZARD: Non combustible.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosion hazard</td>
<td>No data available.</td>
</tr>
<tr>
<td>Reactivity</td>
<td>The product is non-reactive under normal conditions of use, storage and transport.</td>
</tr>
</tbody>
</table>

**5.3. Special protective equipment and precautions for fire-fighters**

<table>
<thead>
<tr>
<th>Precautionary measures fire</th>
<th>Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefighting instructions</td>
<td>Dilute toxic gases with water spray.</td>
</tr>
<tr>
<td>Protection during firefighting</td>
<td>Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.</td>
</tr>
</tbody>
</table>

---

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**6.1.1. For non-emergency personnel**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency procedures</td>
<td>Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.</td>
</tr>
</tbody>
</table>

Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

**6.1.2. For emergency responders**

<table>
<thead>
<tr>
<th>Protective equipment</th>
<th>Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.</th>
</tr>
</thead>
</table>

---

**6.2. Environmental precautions**

Avoid release to the environment.

---

**6.3. Methods and material for containment and cleaning up**

<table>
<thead>
<tr>
<th>For containment</th>
<th>Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods for cleaning up</td>
<td>Mechanically recover the product. Prevent dust cloud formation. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.</td>
</tr>
</tbody>
</table>

Other information: Dispose of materials or solid residues at an authorized site.

---

**6.4. Reference to other sections**

For further information refer to section 13.

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07/03/2018 EN (English US) 2/7
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements.

Hygiene measures: Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage conditions: Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.


Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Storage area: Limited time of storage. Meet the legal requirements. Keep out of direct sunlight.

Special rules on packaging: SPECIAL REQUIREMENTS: hermetical. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials: SUITABLE MATERIAL: cardboard. synthetic material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:


Materials for protective clothing:

GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles. Safety glasses

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):
### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White granules.</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless to white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 7</td>
</tr>
<tr>
<td>Melting point</td>
<td>1127 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not flammable Non flammable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 0.13 hPa (20 °C)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.7</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1670 kg/m³</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>246.48 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Water: 71 g/100ml Ether: 1.2 g/100ml</td>
</tr>
<tr>
<td>Log Pow</td>
<td>Not applicable (inorganic substance)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 150 °C</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not oxidising</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum ignition energy</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC content</td>
<td>0 %</td>
</tr>
<tr>
<td>Other properties</td>
<td>Substance has neutral reaction</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

None under normal conditions.

#### 10.4. Conditions to avoid

None to our knowledge.

#### 10.5. Incompatible materials


#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects
## Magnesium Sulfate Heptahydrate Safety Data Sheet

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

### Acute toxicity

- **oral**: Not classified (Based on available data, the classification criteria are not met)
- **dermal**: Not classified
- **inhalation**: Not classified

### LD50 Oral Rat

- LD50 oral rat: > 4000 mg/kg (Rat)

### LD50 Dermal Rat

- LD50 dermal rat: > 2000 mg/kg (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value)

### Skin corrosion/irritation

- Not classified (Based on available data, the classification criteria are not met)

### Serious eye damage/irritation

- Not classified (Based on available data, the classification criteria are not met)

### Respiratory or skin sensitization

- Not classified (Lack of data)

### Reproductive toxicity

- Not classified (Lack of data)

### Specific target organ toxicity – single exposure

- Not classified (Lack of data)

### Specific target organ toxicity – repeated exposure

- Not classified (Lack of data)

### NOAEL (subacute, oral, animal/male, 28 days)

- NOAEL (subacute, oral, animal/male, 28 days): >= 1500 mg/kg body weight (OECD 422 method) (results obtained by read-across) (Bibliographic results)

### NOAEL (subacute, oral, animal/female, 28 days)

- NOAEL (subacute, oral, animal/female, 28 days): >= 1500 mg/kg body weight (OECD 422 method) (results obtained by read-across) (Bibliographic results)

### Aspiration hazard

- Not classified (Not applicable)

### Viscosity, kinematic

- No data available

### Potential Adverse human health effects and symptoms

- Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Slightly harmful in contact with skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.

### Symptoms/effects after inhalation

- AFTER INHALATION OF DUST: Coughing. Slight irritation.

### Symptoms/effects after skin contact

- No effects known.

### Symptoms/effects after eye contact

- Slight irritation.

### Symptoms/effects after ingestion


### Chronic symptoms

- No effects known.

### SECTION 12: Ecological information

#### 12.1. Toxicity

- **Ecology - general**: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
- **Ecology - air**: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

#### LC50 fish 1

- LC50 fish 1: 15500 mg/l (96 h, Gambusia affinis)

#### EC50 Daphnia 1

- EC50 Daphnia 1: 1700 mg/l (24 h, Daphnia magna)

#### ErC50 (algae)

- ErC50 (algae): 2700 mg/l (results obtained by read-across) (Bibliographic results)

#### 12.2. Persistence and degradability

- **Persistence and degradability**: Biodegradability: not applicable.
- **Biochemical oxygen demand (BOD)**: Not applicable
- **Chemical oxygen demand (COD)**: Not applicable
- **ThOD**: Not applicable
- **BOD (% of ThOD)**: Not applicable
Magnesium Sulfate Heptahydrate
Safety Data Sheet

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Magnesium Sulfate Heptahydrate (10034-99-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : LWCA (the Netherlands): KGA category 05.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Product/Packaging disposal recommendations : Remove to an authorized dump (Class I). Precipitate/make insoluble. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated

Transportation of Dangerous Goods

Proper Shipping Name (Transportation of Dangerous Goods) : Not regulated for transport

Transport by sea

Proper Shipping Name (IMDG) : Not regulated for transport

Air transport

Proper Shipping Name (IATA) : Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

| Magnesium Sulfate Heptahydrate                      | CAS-No. 10034-99-8 | 100% |

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Magnesium Sulfate Heptahydrate (10034-99-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

EU-Regulations
No additional information available

National regulations
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listed on the AICS (Australian Inventory of Chemical Substances)
listed on IECSG (Inventory of Existing Chemical Substances Produced or Imported in China)
listed on INSO (Mexican national Inventory of Chemical Substances)
listed on NZIoC (New Zealand Inventory of Chemicals)
listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
The anhydrous form of this material is listed on the United States TSCA (Toxic Substance Control Act) inventory

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date: 06/11/2018

NFPA health hazard: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating
Health: 0 Minimal Hazard - No significant risk to health
Flammability: 0 Minimal Hazard - Materials that will not burn
Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.