MAGNESIUM CITRATE
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 12/23/2015  Revision date: 12/23/2015  Supersedes: 11/12/2015  Version: 2.0

SECTION 1: Identification

1.1. Identification
Product form : Substance
Substance name : MAGNESIUM CITRATE
CAS No : 7779-25-1
Product code : 2547, 2549, 2550 & 3549
Formula : Mg3(C6H5O7)2
Other means of identification : 3344-18-1

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Food Additives in Nutrients
Food industry: supplement
Pharmaceuticals

1.3. Details of the supplier of the safety data sheet
Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
justin.kuehnel@jostchemical.com - www.jostchemical.com

1.4. Emergency telephone number
Emergency number : CHEMTREC 800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
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)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance
Substance type : Mono-constituent
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 : Move the affected person away from the contaminated area and into the fresh air.
First-aid measures after skin contact : Immediately remove contaminated clothing or footwear. If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water.
First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Consult an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.
First-aid measures after ingestion : Drink plenty of water. Ingestion of large quantities: immediately to hospital. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation : May cause respiratory irritation.
Symptoms/injuries after skin contact : Slight irritation.
Symptoms/injuries after eye contact: Slight irritation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Fire hazard: Not flammable.
Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters
Firefighting instructions: Do not dispose of fire-fighting water in the environment. Cool down the containers exposed to heat with a water spray.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Protective clothing. See "Material-Handling" to select protective clothing.
Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up
For containment: Collect all waste in suitable and labeled containers and dispose according to local legislation.
Methods for cleaning up: Recover mechanically the product. This material and its container must be disposed of in a safe way, and as per local legislation. Clean contaminated surfaces with an excess of water.
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.

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. Dust extraction (suction). Avoid contact with skin and eyes. Avoid dust formation.
Hygiene measures: 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: Does not require any specific or particular technical measures.
Incompatible materials: Strong oxidizers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Appropriate engineering controls: Extraction to remove dust at its source. Ensure good ventilation of the work station.
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Personal protective equipment:

Materials for protective clothing:
- Wear suitable protective clothing, gloves and eyeface protection.

Hand protection:
- Impermeable protective gloves.

Eye protection:
- Chemical goggles or safety glasses.

Skin and body protection:
- Wear suitable protective clothing.

Respiratory protection:
- Dust production: dust mask with filter type P1.

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>Crystals. Powder.</td>
</tr>
<tr>
<td>Color</td>
<td>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>3.5 - 4.5</td>
</tr>
<tr>
<td>pH solution</td>
<td>50 g/l (20 °C; aqueous solution)</td>
</tr>
<tr>
<td>Melting point</td>
<td>184 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</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>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>451.13 g/mol (anhydrous)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Poorly soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

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

No dangerous reactions known under normal conditions of use.
### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Based on available data, the classification criteria are not met)</td>
<td></td>
</tr>
<tr>
<td>pH: 3.5 - 4.5</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Based on available data, the classification criteria are not met)</td>
<td></td>
</tr>
<tr>
<td>pH: 3.5 - 4.5</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Lack of data)</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>(Not applicable)</td>
<td></td>
</tr>
<tr>
<td>Symptoms/injuries after inhalation</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Symptoms/injuries after skin contact</td>
<td>Slight irritation.</td>
</tr>
<tr>
<td>Symptoms/injuries after eye contact</td>
<td>Slight irritation.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - general</td>
<td>The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

<table>
<thead>
<tr>
<th>Effect on the global warming</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No known ecological damage caused by this product.</td>
</tr>
</tbody>
</table>
SECTI0N 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

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

TDG
TDG Proper Shipping Name: 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

MAGNESIUM CITRATE (7779-25-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

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: 12/23/2015

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

NFPA fire hazard: 1 - Must be preheated before ignition can occur.

NFPA reactivity: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

SDS US (GHS 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.