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

<table>
<thead>
<tr>
<th>1.1. Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product form</strong>: Substance</td>
</tr>
<tr>
<td><strong>Trade name</strong>: Magnesium Citrate Tribasic Hydrate</td>
</tr>
<tr>
<td><strong>Chemical name</strong>: Magnesium Citrate Tribasic Hydrate</td>
</tr>
<tr>
<td><strong>CAS No</strong>: 3344-18-1</td>
</tr>
<tr>
<td><strong>Product code</strong>: 2526, 2535, 2542 &amp; 2544</td>
</tr>
<tr>
<td><strong>Formula</strong>: (\text{Mg}_3(C_6H_5O_7)_2\cdot x\text{H}_2\text{O})</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.2. Relevant identified uses of the substance or mixture and uses advised against</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of the substance/mixture</strong>: Food-stuff industry, Pharmaceutical industry.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.3. Details of the supplier of the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jost Chemical Co.</strong></td>
</tr>
<tr>
<td><strong>8150 Lackland Rd.</strong></td>
</tr>
<tr>
<td><strong>Saint Louis, Missouri 63114</strong></td>
</tr>
<tr>
<td><strong>T 314-428-4300 - F 314-428-4366</strong></td>
</tr>
<tr>
<td><strong><a href="http://www.jostchemical.com">www.jostchemical.com</a></strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.4. Emergency telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency number</strong>: CHEMTREC 800-424-9300</td>
</tr>
</tbody>
</table>

### SECTION 2: Hazards identification

<table>
<thead>
<tr>
<th>2.1. Classification of the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Classification (GHS-US)</strong>: Not classified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.2. Label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GHS-US labeling</strong>: No labeling applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.3. Other hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No additional information available</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.4. Unknown acute toxicity (GHS US)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not applicable</strong></td>
</tr>
</tbody>
</table>

### SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>3.1. Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substance type</strong>: Mono-constituent</td>
</tr>
<tr>
<td><strong>Name</strong>: MAGNESIUM CITRATE</td>
</tr>
<tr>
<td><strong>CAS No</strong>: 3344-18-1</td>
</tr>
</tbody>
</table>

**Full text of H-phrases: see section 16**

<table>
<thead>
<tr>
<th>3.2. Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not applicable</strong></td>
</tr>
</tbody>
</table>

### SECTION 4: First aid measures

<table>
<thead>
<tr>
<th>4.1. Description of first aid measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First-aid measures after inhalation</strong>: Remove person to fresh air and keep comfortable for breathing. Move the affected person away from the contaminated area and into the fresh air.</td>
</tr>
<tr>
<td><strong>First-aid measures after skin contact</strong>: Immediately remove contaminated clothing or footwear. Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.</td>
</tr>
<tr>
<td><strong>First-aid measures after eye contact</strong>: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.</td>
</tr>
<tr>
<td><strong>First-aid measures after ingestion</strong>: Drink plenty of water. Ingestion of large quantities: immediately to hospital.</td>
</tr>
</tbody>
</table>
4.2. Most important symptoms and effects, both acute and delayed

<table>
<thead>
<tr>
<th>Symptoms/injuries after inhalation</th>
<th>May cause respiratory irritation.</th>
</tr>
</thead>
<tbody>
<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>

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Fire hazard: Not flammable.


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. Complete protective clothing. Self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.

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 8 : Exposure-controls/personal protection**.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wear personal protective equipment. Ensure good ventilation of the work station. 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 measures.


Incompatible materials: Strong oxidizers.

7.3. Specific end use(s)

No additional information available
SECTION 8: Exposure controls/personal protection

### Control parameters

<table>
<thead>
<tr>
<th>Magnesium Citrate Tribasic Hydrate (3344-18-1)</th>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>15 mg/m³ Total Dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³ Respiratory Dust</td>
</tr>
</tbody>
</table>

#### 8.1 Exposure controls

**Appropriate engineering controls**

Ensure good ventilation of the work station. Extraction to remove dust at its source.

**Personal protective equipment**

- Hand protection: protective gloves.
- Eye protection: Chemical goggles or safety glasses. Safety glasses.
- Skin and body protection: Wear suitable protective clothing.
- Respiratory protection: Dust production: dust mask with filter type P1.
- Environmental exposure controls: Avoid release to the environment.

### 8.2 Exposure controls

**Hand protection**

- protective gloves.

**Eye protection**

- Chemical goggles or safety glasses. Safety glasses.

**Skin and body protection**

- Wear suitable protective clothing.

**Respiratory protection**

- Dust production: dust mask with filter type P2.

### SECTION 9: Physical and chemical properties

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

**Physical state**

- Solid

**Appearance**

- Crystals. Powder.

**Color**

- white

**Odor**

- Odorless

**Odor threshold**

- No data available

**pH**

- 3.5 - 4.5

**pH solution**

- 50 g/l (20 °C; aqueous solution)

**Melting point**

- 184 °C

**Freezing point**

- Not applicable

**Boiling point**

- No data available

**Flash point**

- Not applicable

**Relative evaporation rate (butyl acetate=1)**

- No data available

**Flammability (solid, gas)**

- No data available

**Explosion limits**

- Not applicable

**Explosive properties**

- No data available

**Oxidizing properties**

- No data available

**Vapor pressure**

- No data available

**Relative density**

- Not applicable

**Relative vapor density at 20 °C**

- No data available

**Molecular mass**

- 451.13 g/mol (anhydrous)

**Solubility**

- Poorly soluble in water.

**Log Pow**

- No data available

**Log Kow**

- No data available

**Auto-ignition temperature**

- Not applicable

**Decomposition temperature**

- No data available

**Viscosity**

- No data available

**Viscosity, kinematic**

- Not applicable

**Viscosity, dynamic**

- No data available

#### 9.2 Other information

No additional information available
SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
Strong oxidizers.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

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
Effect on the global warming: No known ecological damage caused by this product.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Waste treatment methods: Dispose in a safe manner in accordance with local/national regulations.
Waste disposal recommendations: Remove to an authorized dump.

SECTION 14: Transport information
Department of Transportation (DOT)
In accordance with DOT
Not regulated for transport

Additional information
Other information: No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information
15.1. US Federal regulations
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
Magnesium Citrate Tribasic Hydrate (3344-18-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations
Magnesium Citrate Tribasic Hydrate (3344-18-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

National regulations
Magnesium Citrate Tribasic Hydrate (3344-18-1)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)

15.3. US State regulations

SECTION 16: Other information
Indication of changes: Initial SDS.
Magnesium Citrate Tribasic Hydrate
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

HMIS III Rating
Health: 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal Protection: E
E - Safety glasses, Gloves, Dust respirator

SDS US Custom (-ADR)

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.