1. Identification of the substance & the company

Trade name Magnesium Chloride Hexahydrate Flakes
Chemical formula Not applicable
Type of product and use Industrial flooring, abrasive and textile industry, water treatment, fertilizer mixtures, animal feed, oil drilling, ice and dust control
Company Dead Sea Work Ltd
P.O.B. 75 Beer Sheva 84100, Israel
Tel: +972-8-6465347
Fax: +972-8-6280533
www.dswsalts.com

Emergency telephone number: 972-8-9977577

2. Hazards identification

Adverse human health effects May irritate eyes
Not classified as dangerous

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>Weight %</th>
<th>Index No.</th>
<th>EC No.</th>
<th>EU Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Chloride Hexahydrate</td>
<td>46.5-47</td>
<td></td>
<td>2320946 (anhydrous CAS 7786-30-3)</td>
<td>None</td>
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<tr>
<td>7791-18-6</td>
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<tr>
<td>Calcium Chloride</td>
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<td>017-013-00-2</td>
<td>233-140-8</td>
<td>Xi;R36</td>
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<tr>
<td>10043-52-4</td>
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<td></td>
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<tr>
<td>Sodium Chloride</td>
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<td>231-598-3</td>
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<tr>
<td>7647-14-5</td>
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<tr>
<td>Potassium Chloride</td>
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<td>231-211-8</td>
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<tr>
<td>7447-40-7</td>
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</tr>
<tr>
<td>Water of crystallization</td>
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<td>231-791-2</td>
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<tr>
<td>7732-18-5</td>
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</tr>
</tbody>
</table>

Revision: 304/07/2011
4. First-aid measures

Eye contact
Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention if irritation persists.

Skin contact
Wash with water in case of irritation. Get medical attention if irritation occurs and persists.

Inhalation
In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion
If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink.

Notes to the physician
In case of ingestion, the salt level in blood must be determined. Treat symptomatically and supportively.

5. Fire-fighting measures

Fire fighting procedure
In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode

Unusual fire and explosion hazards
When heated to decomposition, may release poisonous and corrosive fumes of HCl

6. Accidental release measures

Personal precautions
Wear protective clothing specified for normal operations (see section 8).

Methods for cleaning up
Sweep up, place in a bag and hold for waste disposal or possible re-use

7. Handling and storage

Handling
Keep containers tightly closed.
Product name: Magnesium Chloride Hexahydrate Flakes
Product id: 8677-F
Revision date: 04/07/2011
Supersedes: 08/09/2009

Storage: Keep in a dry, well-ventilated place away from incompatible materials (see "materials to avoid").

8. Exposure controls / personal protection

Exposure Limits:

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH-TLV Data</th>
<th>OSHA (PEL) Data</th>
</tr>
</thead>
<tbody>
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<td>Magnesium Chloride</td>
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<td>Not determined</td>
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<tr>
<td>Hexahydrate</td>
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<td>Calcium Chloride</td>
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<td>Not determined</td>
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<tr>
<td>10043-52-4</td>
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<tr>
<td>Sodium Chloride</td>
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<td>Not determined</td>
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<tr>
<td>7647-14-5</td>
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<td></td>
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<tr>
<td>Potassium Chloride</td>
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<td>Not determined</td>
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<tr>
<td>7447-40-7</td>
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<tr>
<td>Water of crystallization</td>
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<td>Not determined</td>
</tr>
<tr>
<td>7732-18-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ventilation requirements: Good general ventilation. Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m³, respirable particles, and 10 mg/m³, inhalable particles (ACGIH recommendation for Particles (Insoluble or poorly soluble) Not Otherwise Specified (PNOS)).

Personal protective equipment:
- Respiratory protection: In case of significant or accidental dust emissions, dust mask should be worn
- Hand protection: Protective gloves
- Eye protection: Chemical safety goggles
- Skin and body protection: Body covering clothes and boots

Hygiene measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Safety shower and eye bath should be provided.
9. Physical and chemical properties

Appearance: White flakes
Boiling point/range: Not applicable
Melting point/range: 118°C (244°F)
Flash point: Non-combustible
Auto-ignition temperature: Not applicable
Vapour pressure: Not available
Solubility:
- Solubility in water: 167g/100g
Bulk density: 800-900 kg/m³
Density: 1.6 g/cm³ (20°C)
pH: 8.2 @ 10% aqueous solution
Decomposition temperature: >160°C

10. Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: oxidizing agents
Conditions to avoid: Exposure to moisture  Heating above decomposition temperature
Hazardous decomposition products: Oxides of: potassium, calcium, magnesium, sodium and HCl
Hazardous polymerization: Will not occur

11. Toxicological information

Acute toxicity:
- Rat oral LD50: 8100 mg/kg (for MgCl2)
- Mouse oral LD50: 7600 mg/kg  (for MgCl2)
Mutagenicity: Not available
Carcinogenicity: Not classified by IARC
Not included in NTP 11th Report on Carcinogens

12. Ecological information

Information on ecological effects: MgCl2 is a seawater component
13. Disposal considerations

Waste disposal
Observe all federal, state and local environmental regulations when disposing of this material.

Disposal of Packaging
Containers can be recycled after proper cleaning.

14. Transportation information

IMO
Not regulated

ICAO/IATA
Not regulated

DOT
Not regulated

15. Regulatory information

EU
- Indication of danger
Anhydrous MgCl₂ is reported EINECS
Not subject to labelling in accordance with EEC Directives.

USA
Reported in the EPA TSCA Inventory.

Australia
Listed in AICS

Canada
Listed in DSL

China inventory
Listed

Japan
Listed in ENCS

New Zealand Inventory
Listed in NZIoC

Philippines
Listed in PICCS
MATERIAL SAFETY DATA SHEET

- **Product name**: Magnesium Chloride Hexahydrate Flakes
- **Product id**: 8677-F
- **Revision date**: 04/07/2011
- **Supersedes**: 08/09/2009

### 16. Other information

This data sheet contains changes from the previous version in section(s) 3, 15

The information herein is based on the present state of our knowledge. It is believed to be correct but is not necessarily all-inclusive and shall be used only as a guide. DEAD SEA WORKS Ltd, shall not be held liable for any damage resulting from handling or from contact with the above product. For further information, contact DEAD SEA WORKS Ltd.

**Prepared by**

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- e-mail: msdsinfo@icl-ip.com

End of safety data sheet