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| <b>SAFETY DATA SHEET</b> | <b>DEAD SEA WORKS LTD</b><br>Potash House, P.O.Box 75, Beer-Sheva 84100 Israel<br><b>MARKETING DIVISION CHEMICAL PRODUCTS</b><br>TEL: +972-8-6465347; FAX: +972-8-6280533 |
|                          | Trade Name: MAG Flakes <span style="float: right;">Page 1 of 5</span>   |

### Section 1: Product and Company identification

Commercial Product Name: MAG Flakes  
CAS: (Magnesium chloride) 7791-18-6  
Manufacturer: Dead Sea Work LTD  
P.O.B Beer Sheva 84100, Israel  
Tel: +972-8-6465347  
Fax: +972-8-6280533  
[www.dswwsalts.com](http://www.dswwsalts.com)

### Section 2: Composition/Information on Ingredients

Appearance: White flakes odorless soluble in water

| Chemical name           | CAS-No     | EINECS-No | Concentration % | Classification |
|-------------------------|------------|-----------|-----------------|----------------|
| Magnesium Chloride      | 7791-18-6  | -         | 46.5-47.5       | -              |
| Calcium Chloride        | 10043-52-4 | 233-140-8 | 2-2.2           | R36, Xi        |
| Sodium Chloride         | 7647-14-5  | 231-598-3 | 0.5-0.8         | -              |
| Potassium Chloride      | 7447-40-7  | 231-211-8 | 0.2-0.5         | -              |
| Water of crystalization | 7732-18-5  | 231-791-2 | Balance         | -              |

(See full text of R-phrases in chapter 16.)

### Section 3: Hazards Identification

May be irritating to eyes and respiratory system.

Not classified as hazardous material.

### Section 4: First - Aid Measures

Symptoms: This substance is not considered toxic or dangerous, though care should be taken during use and any questions referred to medical personnel

Skin contact: The substance is not dangerous. However, over exposure or contact with open wounds may cause slight irritation

Eyes contact: Wash with water for at least 15 minutes (open eyes).

Ingestion: Do not induce vomiting. The substance is not dangerous. Obtain medical attention.

Inhalation: The substance is not dangerous by inhalation.

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### Section 5: Fire-Fighting Measures

**Fire: Non-combustible**

**Suitable extinguishing media:** Use any means suitable for extinguishing surrounding fire

**Extinguishing media which must not be used for safety reasons:** None

In the event of a fire, wear full protective clothing and a self-contained breathing apparatus.

### Section 6: Accidental Release Measures

Avoid contamination of water sources.

Pick up mechanically and dispose according to point 13. Minor residues to be washed away with excessive water flow. If spilling occurs on public highway, wash toughly with water and absorbent should be applied (i.e. sand) to prevent skidding on a slippery surface. Disposal of waste water according to regulations.

### Section 7: Handling and Storage

Keep away from incompatible materials (see section 10).

Safety phrases

S22: Do not breathe dust.

S25: Avoid contact with eyes.

Prevent contact with water or humid atmosphere.

Keep bags tightly closed and dry.

### Section 8: Exposure Control / Personal Protection

Threshold values: Not available

Personal Protective equipment: Generally, personal protection is a function of exposure. It is recommended to use working shoes, working clothes or lab coat. Working should be done in a well-ventilated area. In addition: Dust mask under strong dust development, full protective gear includes: protective cloth, boots, rubber gloves and breathing apparatus- according to the level of exposure.

Respiratory protection: If the exposure limit is exceeded and engineering controls are not feasible, use particulate respirator.

In case of an emergency: Full protective gear and a self-contained breathing apparatus should be used, according to the severity.

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### Section 9: Physical and Chemical Properties

General information:

Form: Flakes

Color: white

**Boiling point °C:** N/A

**Melting point °C:** N/A

**Density gr/cm<sup>3</sup>:** 1.6 in 20°C

**Change in physical state:** Hygroscopic

**Vapor density (air=1):** N/A

**Vapor pressure (mm Hg):** N/A

**Solubility (in water):** 167 g/100 ml water

**pH:** 8.2, at 10% in aqueous solution

**Bulk density:** 800-900 kg/m<sup>3</sup>

**Flash point °C:** Non-flammable

**Auto-ignition temperature °C:** N/A

**LEL:** N/A **UEL:** N/A

**Viscosity:** N/A

### Section 10: Stability and Reactivity

**Hazardous polymerization:** Will not occur.

**Chemical reactivity:** Stable under ordinary conditions. Hygroscopic. May react with oxidizing agents.

**Hazardous decomposition products:** Oxides of: potassium, calcium, magnesium and sodium, and above 160°C decomposes giving HCl gases

### Section 11: Toxicological Information

Acute toxicity by manufacture:

LD50 (oral rat) 8100 mg/kg

Magnesium Chloride:

LD50 (oral rat) 2800 mg/kg

Calcium Chloride:

LD50 (oral rat) 1000 mg/kg

LD50 (oral mouse) 1940 mg/kg

Sodium Chloride:

LD50 (oral rat) 3000 mg/kg

LD50 (absorption through skin rabbit) 10000 mg/kg

LC50 (inhalation rat) 42000 mg/m<sup>3</sup> (60 minutes )

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Potassium Chloride:

LD50 (oral rat) 2600 mg/kg

LD50 (oral mouse) 383 mg/kg

LD50 (intraperitoneal rat) 660 mg/kg

LDLo (intraperitoneal dog) 85 mg/kg

### Section 12: Ecological Information

**Environmental hazards:** If properly introduced in small concentrations into adapted biological sewage treatment plants, decomposition of the activated sludge is not affected.

Not mentioned in the EC Regulations of 4/5/76 concerning discharge of dangerous materials into waters, neither in List I nor List II.

MgCl<sub>2</sub> is a component of seawater

**Biodegradability:** No data available.

### Section 13: Disposal Considerations

Dispose of in accordance with local regulations.

Contaminated Packaging: Contaminated bags should be emptied thoroughly; after proper cleaning they can be recycled.

### Section 14: Transport Information

Non-hazardous for air, sea and road transportation.

### Section 15: Regulatory Information

Labeling in accordance with EC directives: No specific marking required according to EC-Regulations 67/548

R-phrases: Not available

S-phrases:

S22: Do not breathe dust.

S25: Avoid contact with eyes.

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### **Section 16: Other Information**

Full text of R-phrases with No. appearing in section 2:  
R36: Irritating to eyes.

**NFPA Ratings:** Health: **1** Flammability: **0** Reactivity: **0**

Date of issue: 30<sup>TH</sup> October 2005

According to Commission Directive 2001/59/EC

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, and Haz-Mat 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 or Haz-Mat Ltd .