

MAG®

Powerful

Performance

that is Naturally

Safer for Pets,

People and the

Environment



www.mag-icemelt.com

MAG®

MAG®

MAG® OUT-PERFORMS OTHER ICE MELTERS

MAG® melts ice effectively at temperatures as low as -13°F (-25C°) — considerably below most other products.

And it works fast. In tests at +21°F, within 15 minutes of application **MAG® melted twice as much ice as rock salt (halite).**

MAG® is the proven professional-grade snow and ice melter that delivers safe surfaces for commercial and residential building owners and facilities managers.



As An Ice Melter

	Magnesium Chloride	Calcium Chloride	Sodium Chloride
Ice Melting Effectiveness at 21°F ¹			
After 15 minutes	27g	30g	12g
After 60 minutes	36g	38g	32g
Residue	Clear Liquid	Oily-Like Liquid Film	Dry White Powder
Corrosion – Aluminum (mils/year) ²	0.375	3.0	1.5
Corrosion – Tin ³	2.1	13.9	17.9
Effective Melting Temperatures	-13°F	-25°F	+20°F

Notes:

- Results of ice melting tests performed by Swedish VTI. 10 grams of ice melter were spread evenly on an icy surface. After specified period of time, melted water was drained and measured.
- Exposed to a 150 g/l brine for 22 days by Kali Forchungs Institute (Germany).
- Exposed to a 150 g/l brine (160 g/l brine for MAG) for 120 days by Kali Forchungs Institute.



The High Performance Ice Melter

www.mag-icemelt.com

© 2013 Dead Sea Works



TOTAL ICE CONTROL

NATURALLY PET FRIENDLY

MAG[®] is pure and natural Magnesium Chloride.

MAG[®] is 100% natural, clean, effective, and safer when compared to common de-icers.

MAG[®] is nearly three times less toxic than common table salt and eight times less toxic than calcium chloride. With **MAG[®]**, there's less worry about pets licking their paws when they return from a walk.

In fact, a form of Magnesium Chloride is used in farm feedstock as a mineral supplement.

HIGH PERFORMANCE ICE MELTER

MAG[®] is the best total ice melter available - it is proven more effective, environmentally safer and less damaging than other common ice melters.

Ice melting performance is measured not only by the speed of the melting action but also by the quantity of brine produced per unit of ice melter used.

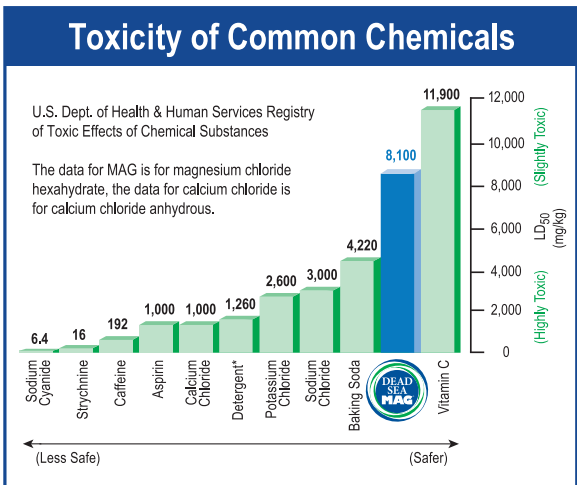
MAG[®] freezes (a 22% solution) at -27°F (-33°C) and melts effectively down to -13°F (-25°C) - well below most other ice melters.

THE DEAD SEA DIFFERENCE

MAG[®] is extracted from the Dead Sea by the natural evaporation of seawater and a simple refinement process, making it your naturally safer choice for total ice control.

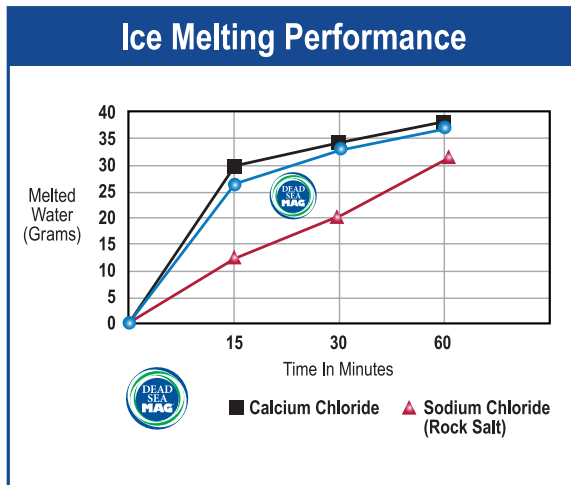
This extraordinary mineral composition makes the Dead Sea waters therapeutic and a popular choice for vacationers.

The concentration of magnesium chloride in the southern portion of the Dead Sea is as high as 20%.

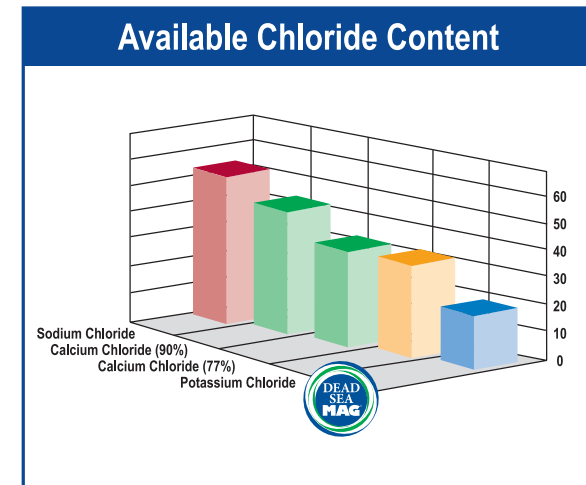


*Sodium Dodecylbenzene Sulfonate

As shown by the data, **MAG[®]** is less toxic than baking soda and table salt, chemicals we ingest on a daily basis. When compared to other ice melting chemicals, **MAG[®]** is much less toxic and much safer to use around animals, pets and humans.



The tests were performed by the Swedish VTI by spreading 10 grams of each ice melter evenly over an icy surface at +21°F.



www.mag-icemelt.com

© 2013 Dead Sea Works

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	MAG Pellets	
Product id	8677-PL	
Revision date	18/07/2016	Revision: 4
Supersedes	04/07/2011	

1. Identification of the substance & the company

Trade name	MAG Pellets
Chemical formula	MgCl ₂ *6H ₂ O
Type of product and use	Ice and dust control
Supplier	Dead Sea Work LTD P.O.B. Beer Sheva 84100, Israel Tel: +972-8-6465347 Fax: +972-8-6280533 www.dsosalts.com
Emergency Telephone	+972-8-9977577 Chemtrec: (800) 424-9300 Medical: PROSAR 1-888-875-1685 (24HRS)

2. Hazards identification

GHS classification	Not classified
Labels and other form of warning	Not required.
NFPA Ratings (Scale 0-4)	Health = 0, Fire = 0, Reactivity = 0.

3. Composition / information on ingredients

Components	CAS No.	Weight %
Magnesium Chloride Hexahydrate	7791-18-6	>95

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 immediately.
Skin contact	Wash with water in case of irritation. Get medical attention if irritation occurs and persists.
Inhalation	In case of inhalation, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	MAG Pellets	
Product id	8677-PL	
Revision date	18/07/2016	Revision: 4
Supersedes	04/07/2011	

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

NOTE: Never give an unconscious person anything to drink

Most important symptoms and effects, acute or delayed

None known

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

5. Fire - fighting measures

Suitable extinguishing media Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.

Extinguishing media not to be used None known.

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

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

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 reuse.

Environmental precautions Prevent product from entering waterways.

7. Handling and storage

Handling Keep containers tightly closed.

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

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	MAG Pellets	
Product id	8677-PL	
Revision date	18/07/2016	Revision: 4
Supersedes	04/07/2011	

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
Magnesium Chloride Hexahydrate 7791-18-6	Not determined	Not determined

Ventilation requirements Good general ventilation.

Personal protective equipment:

- **Respiratory protection** Not normally required; In case of dust formation use an approved particulate respirator.
- **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 thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and chemical properties

Appearance	White pellets
Odor	None.
pH	8.2 @ 10% aqueous solution
Melting point/range	118°C (244°F)
Boiling point/range	Not applicable
Flash point	Non-combustible Not applicable
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammability (solid, gas)	Not flammable
Flammable/Explosion limits	Not flammable/Not explosive
Vapor pressure	Not available
Density	1.6 g/cm ³ (20°C)
Solubility:	
- Solubility in water	167g/100g
Partition coefficient (n-octanol/water)	Not determined
Auto-ignition temperature	Not self-ignitable
Decomposition temperature	>160°C
Viscosity	Not determined
Bulk density	800-900 kg/m ³
Explosive properties	Not explosive
Oxidising properties	No oxidising properties can be predicted on the basis of chemical structure

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	MAG Pellets	
Product id	8677-PL	
Revision date	18/07/2016	Revision: 4
Supersedes	04/07/2011	

10. Stability and reactivity

Reactivity	None known.
Stability	Stable under normal conditions
Possibility of hazardous reactions	Not expected to occur
Conditions to avoid	Exposure to moisture. Heating above decomposition temperature.
Materials to avoid	Oxidizing agents.
Hazardous decomposition products	Oxides of: potassium, calcium, magnesium and HCl

11. Toxicological information

Acute toxicity:

- Rat oral LD50	8100 mg/kg (for MgCl ₂)
- Mouse oral LD50	7600 mg/kg (for MgCl ₂)
- Dermal irritation (rabbit)	Not irritant
- Eye irritation (rabbit)	Not irritant
Dermal sensitization	Not a sensitizer
Mutagenicity	Not established
Carcinogenicity	Not classified by IARC Not included in NTP 13th Report on Carcinogens
Reproductive toxicity	No adverse effect were observed on fertility and/or on the development
Specific Target Organ Toxicity (STOT) - Single exposure	No effects on specific target organs have been identified
Specific Target Organ Toxicity (STOT) - Repeat exposure	No effects on specific target organs have been identified
Aspiration hazard	Not expected to occur

12. Ecological information

Note:	MgCl ₂ is a seawater component
Aquatic toxicity	Not applicable

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	MAG Pellets	
Product id	8677-PL	
Revision date	18/07/2016	Revision: 4
Supersedes	04/07/2011	

Persistence and degradability Not relevant for inorganic salts

Bioaccumulative potential Not expected to bioaccumulate

Mobility in soil Not relevant for inorganic salts

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. Dispose of in a safe manner in accordance with local/national regulations.

14. Transportation information

DOT Not regulated

IMDG Not regulated

ICAO/IATA Not regulated

15. Regulatory information

USA Reported in the EPA TSCA Inventory.

Canada Listed in DSL

EU Anhydrous MgCl₂ is reported in EINECS

Japan Listed in ENCS

Australia Listed in AICS

New Zealand Inventory Listed in NZIoC

China
- China inventory Listed

Taiwan Listed

Philippines Listed in PICCS

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	MAG Pellets	
Product id	8677-PL	
Revision date	18/07/2016	Revision: 4
Supersedes	04/07/2011	

16. Other information

This data sheet contains changes from the previous version in section(s)
1,2,3,8,9,11,12,15

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 HERA Division
telephone: +/972-8-6297835
telefax: +/972-8-6297832
www.icl-ip.com
e-mail:msdsinfo@icl-group.com

End of safety data sheet