

MATERIAL SAFETY DATA SHEET, IN ACCORDANCE TO 1907/2006/EEC



Date of issue :30/04/2013

Section 1. Product Name and Company Identification

Product Name: **Magnesium rasping** **Contact Information:** **SFM SA**
(Société pour la Fabrication du Magnésium)
Product Reference: Rue des Sablons 9
1926 Martigny, Switzerland

Emergency Tel. No. : SOS: +41 (0)27 721 88 88 **Tel. :** +41 (0)27 721 75 90
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Section 2. Composition and Details of Components

Material Characterisation:	Magnesium rasping
EINECS-No.:	231-104-6
CAS-No.:	7439-95-4
EG-No.:	012-002-00-9
UN-No.:	1869
Chemical Symbol:	Mg
Molecular Weight:	24.30
Conc. (% by weight):	> 99
Appearance and Odour :	Silver grey metallic flake, odourless

Section 3. Hazards Identification



HIGHLY FLAMMABLE

Inhalation: Inhalation of dusts or fumes may irritate the respiratory tract and may cause metal fume fever. Symptoms may include coughing, chest pain and fever.

Ingestion: Magnesium metal does not have well characterised toxicity. May cause abdominal pain and diarrhoea.

Skin Contact: Particles embedded in the skin may cause eruptions. Molten magnesium may cause serious skin burns.

Eye Contact: High concentrations if dust may cause mechanical irritation. Magnesium generates an intense bright white light when burning which can cause eye injury.

Chronic Exposure: No information found.

Pre-existing conditions: Existing wounds contaminated with magnesium are very slow to heal.

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Section 4. First Aid Measures

- Inhalation:** Remove to fresh air. Get medical attention for any breathing difficulties.
- Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Skin contact:** Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.
- Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids. If irritation develops or persists get medical attention.

Section 5. Fire Fighting Measures

- Suitable Extinguishers:** Metal extinguishing powders such as G-1 graphite powder, Met-L-X powder, powdered talc, dry graphite, powdered sodium chloride, soda ash or dry sand.
- Unsuitable Extinguishers:** Foam, chlorinated products such as Halon, carbon dioxide or water to extinguish magnesium fires. ***Use of water on molten magnesium will produce hydrogen gas and may cause an explosion.***
- Protective Equipment:** In the event of a fire, wear full protective clothing and NIOSH-approved self contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Fire fighters should protect their eyes and skin from flying particles. In order to prevent eye injury, do not look directly at magnesium fires.
- General Information:** Magnesium when heated above 473°C may auto-ignite. Magnesium in finely divided form will react violently with oxidising agents. Magnesium in contact with moisture or acids will evolve hydrogen which is highly dangerous fire or explosion hazard. Powdered magnesium dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosive concentration is 0.03g/l.

Section 6. Accidental Release Measures

- General Spillage:** Remove all sources of ignition. Ventilate the area of the spill or leak. Wear appropriate personal protective equipment as specified in Section 8. Collect the spilled material and transfer to a clean, dry metal covered container for recovery or disposal. Do not use water in the cleaning process.
- Spillage Involving Water:** If the spilled material has come into contact with water proceed with caution. Evacuate the area, put on fire fighting protective equipment proceed as if dealing with a fire. Hydrogen gas may be being generated which may cause a fire or explosion.

Section 7. Storage and Handling

- Storage:** Only store in the original package - Store in a cool, dry, ventilated area. Protect against physical damage and in a detached fire resistant building protected from moisture and away from oxidisers, chlorine, bromine, iodine, acids and all possible sources of ignition. Storage and working areas should be non-smoking areas.
- Handling:** Use only non-sparking tools and equipment. When transferring this material dust clouds can be generated, observe all warnings and precautions listed for the product.

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Section 8. Exposure Limits and Personal Protection Equipment

- Ventilation:** A system for local and/or general exhaust is recommended to keep employees exposure as low as possible. Local ventilation is generally preferred as it can control the emissions of the container at its source, preventing dispersion of it into the general work area.
- Personal Respirators:** For conditions where exposure to dust is apparent and engineering controls are not feasible NIOSH approved particulate respirator must be worn. For emergencies or instances where the exposure levels are not known, use of a full-face positive pressure respirator is recommended.
- Skin Protection:** Wear impervious protective clothing, including boots, gloves and/or overalls as appropriate to prevent contact with skin.
- Eye Protection:** Use chemically resistance safety glasses or goggles. Maintain eye wash fountain and quick-drench facility at work place.
- General Measures:** Do not inhale dust and avoid contact with eyes and skin. Do not eat, drink or smoke at work place. Remove all contaminated clothing and wash hands and face before take breaks or leaving work.

Section 9. Physical and Chemical Properties

Physical state:	Magnesium metal flake
Appearance:	Silver grey metallic flake
Odour:	None
pH value	Not applicable
Boiling point/boiling range	Not applicable
Melting point/melting range	Abt. 650°C
Flashpoint:	550°C
Ignitable:	Yes
Ignition temperature:	> 300°C to 500°C
Lower (UEG):	Abt. 20g/cm ³
Upper (OEG):	Abt.6kg/cm ³
Vapour pressure:	Not applicable
Density:	1.74g/cm ³
Bulk density:	0.5 – 1.0g/cm ³
Water solubility	Reacts with water
Viscosity:	Not applicable

Section 10. Stability and Reactivity

- Thermal decomposition:** Burns at temperatures above 500°C to form magnesium oxides. Flame temperature can reach over 2000 °C.
- Dangerous reactions:** Magnesium reacts with water and can produce an explosive mixture. Contact with water or moist air may produce flammable gas. The accumulation of fine dust in contact with air, may be dangerous and cause powder explosion. Reacts violently with acids, bases and oxidising agents.
- Dangerous decomposition products:** Hydrogen, Mg nitride (yellow colour) and nitrides
- Additional directions:** Prevent dust cloud formation - dust explosion hazard.

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Section 11. Toxicological Information

Acute toxicity:	Not applicable
Acute toxicity by inhalation:	Not applicable
Skin irritation:	Not applicable
Eye irritation:	Not applicable
Sensitisation:	Not applicable
Genetic changing effects:	Not applicable
Reproduction toxicity:	Not applicable
Carcinogenic:	Not applicable
Experience from practise:	None
General remarks:	No toxicological data. Magnesium is classed as non toxic. No toxic or chronic effects are known. Product is not classed as an irritant.

Section 12. Ecological Information

Degradation according to law on detergent (WRMG):	Not applicable
Toxicity to marine life:	Non determined
Behaviour in sewage plants:	R15: contact with water liberates highly flammable gases
Contain according to 76/464/EEG, Regulation, heavy metals and the following compounds:	No dangerous components known
AOX value:	Non determined
BOD value:	Non determined
General directions:	No ecological data. No harmful effects on the environment are known

Section 13. Direction for Product Waste Disposal

Waste material that cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an approved waste facility. Processing, use or contamination of this product may change the waste management options. Dispose of containers and unused materials in accordance with local and national regulation.

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Section 14. Transport Information

Land transport ADR/RID & GGVS/GGVE regulations

No. 4.1



Class:	4.1	WSII
Danger No.:	423	
UN No.:	1869	
Transport Documents:	1869 Magnesium Class 4.1 GE III ADR	
Packing	Steel drums 1A2 Max. 400kg net.	
Danger:	4.1, Flammable Solid	
Inscriptions:	UN1869	

Ship transport IMDG/GGVSEE regulations

Class:	4.1
UN No.:	1869
Packing group	III
EMS No.:	4.1 – 02
MFAG:	None
Marine pollutant:	No
Proper shipping name:	Magnesium

Air transport ICAO/IATA-DGR

Class:	4.1
UN/ID No.:	1869
Packing group:	III
Correct technical name:	Magnesium

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Section 15. Regulatory Information

Classification: The product is sorted and marked according to the community directives and GefStoffV:

Symbol of danger: F – Highly Flammable

Container Markings: Magnesium EINECS: 231-104-6 CEE-Marking

R-phrases: R11 "Highly Flammable"
R15 / H260: "Contact with water liberates highly flammable gases"



S-phrases: S 2 "Keep away from children"
S 7/8 "Keep container tightly closed and dry"
S 43.3 "In case of fire, use dry sand. Never use water"

Employment restriction acc. to Gefstovf: Observe the employment restrictions.

Regulation in case of disarrangement, limit: Yes

TA-Air-Class: 3.1.3

Water/spring hazard class: 1, according to WwVwS of 17.05.1999

Class/No/name of waste: 353 08 waste containing magnesium

Section 16. Miscellaneous Information

The information above is believed to be accurate and represents the best information currently available to us. However we make no warranty of merchantability or any other warranty, express or implied, with respect to such information and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall SFM SA be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if SFM SA has been advised of the possibility of such damages.