

SAFETY DATA SHEET ACCORDING TO 93/112/CEE

Product: MAGNESIUM ALLOYS POWDER

Date of issue: 26.10.2000

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1. Name of material / preparation and firm

Name of material or preparation: Magnesium alloys powder

A) Supplier:

B) Manufacturer:

Firm: MINMET FINANCING COMPANY

S.A. POUR LA FABRICATION
DU MAGNESIUM

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2. Composition, details of components

2.1 Chemical characterisation / material / preparation:	Magnesium alloys powder
2.2 EINECS-No.:	231-104-6
2.3 CAS-No.:	7439-95-4
2.4 EG-No.:	012-002-00-9
2.5 UN-No.:	1418
2.6 Symbol:	F
2.7 R-phrases:	11 - 15

3. Possible danger

R15: Contact with water liberates highly flammable gases.
Danger of dust cloud explosion



R11: highly flammable

Liberates very intense heat and blinding light and releases significant quantities of irritant fumes.

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4. First - aid – measures

4.1 General measures

When spattered with product, remove any contaminated clothing

4.2 After inhalation (fumes)

Remove to fresh air. Keep at rest. Call for medical attention.

4.3 Following contact with the skin

Wash skin with water. In case of weakness, call for medical attention

4.4 Following contact with the eyes

Flush with adequate amounts of water. Call immediately for medical attention.

4.5 After swallowing

Do not bring up. Rinse mouth and drink a lot of water. Call for medical attention.

4.6 Directions for the doctor

Symptoms

Fever, sick feeling, shiver, gastro-intestinal problems.

Additional directions

Treat symptomatically.

5. Fire fighting measures

5.1 Suitable extinguishers

Use dry sand, cement, extinguisher for burning metals, extinguisher for fire in the surrounding area.

5.2 Unsuitable extinguishers

Water, foam and CO₂

5.3 Danger through products of combustion or decomposition

Can liberate by fire: release significant quantities of fumes, blinding light, risk of release of toxic and flammable products from pyrolysis.

5.4 Protective equipment for fire fighting

Use an independent breathing apparatus (isolated apparatus). Visual protection

5.5 Additional directions

Fire's residue and product must be eliminated according to local regulation in force.
Ask for additional information.

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6. Measures to be taken in case of accidental release

6.1 Protective measures related to person

Prevent dust cloud formation. In case of dust, use a breath protection. Make sure that the airing is enough. Keep away from flammable source. Keep people away and keep upwind

6.2 Environmental protective measures

Do not let go material in canalisation / surface water and underground water. Prevent from spreading to the surface (for ex: anti-oil barrier)

6.3 Measures to be taken after spillage or leakage

Protect from water. Avoid making dust. The collected product must be eliminated according to the regulations in force.

6.4 Additional directions

7. Storage and handling

7.1 Directions for safe handling

Prevent dust cloud formation. In case of dust, proceed to a manual sweeping with a suitable anti-static broom.

7.2 Directions for fire and explosion protection

Store away from any source of ignition. Do not smoke. Avoid storage of electrostatic charges. Avoid mechanical shocks

7.3 Requirement regarding the storage areas and containers

Store only in original packing.

7.4 Directions for storage together with other materials

Do not store in same area as combustible materials. Keep away from water and any other chemical materials.

7.5 Additional directions regarding the storage conditions

Keep drums in well ventilated area. Keep drums well closed. Keep away from water and moistness. Keep dry.

8. Exposure limits and personal protective equipment (clothes)

8.1 Additional directions on

Chemical name:	Magnesium alloys powder
Limit values:	6 mg/m ³
CAS-No.:	7439-95-4

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| 8.2 Respiratory equipment: | use a breath protection for fine dust according to norm EN 149 cl. FFP2S |
| 8.3 Hand protection: | protection gloves in leader |
| 8.4 Eye protection: | protection glasses (eventually) |
| 8.5 Body protection: | antistatic clothing incl. shoes |
| 8.6 General protection measures: | Do not inhale dust. Avoid contact with eyes and skin. |
| 8.7 Hygienic protective measures: | Do not eat, drink and smoke at work. Clean hands before breaks and leaving work. |

9. Physical and chemical properties

- | | |
|---|-----------------------------|
| 9.1 Physical state: | Powder/solid |
| 9.2 Colour: | metallic-silver |
| 9.3 Odour: | none |
| 9.4 pH-value: | non applicable |
| 9.5 Boiling point/boiling range: | non applicable |
| 9.6 Melting point/melting range: | abt 650°C |
| 9.7 Flashpoint: | 550°C |
| 9.8 Ignitability: | yes |
| 9.9 Ignition temperature: | >300 - 500°C |
| 9.10 lower (UEG): | abt. 20 g/cm ³ |
| 9.11 upper (OEG): | 6 kg/m ³ |
| 9.12 Vapour pressure: | non applicable |
| 9.13 Density (g/cm³): | 1,74 |
| 9.14 Bulk density: | 0,5 - 1,0 g/cm ³ |
| 9.15 Water solubility: | react with water |
| 9.16 Viscosity: | non applicable |

10. Stability and reactivity

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

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11. Information on toxicology

11.1	Acute toxicity:	non applicable
11.2	Acute dermal toxicity:	non applicable
11.3	Acute toxicity by inhalation:	non applicable
11.4	Skin irritation:	non applicable
11.5	eyes irritation:	non applicable
11.6	Sensitisation:	non applicable
11.7	Genetic changing effects:	non applicable
11.8	Reproduction toxicity:	non applicable
11.9	Carcinogenic:	non applicable
11.10	Experience from practice:	none
11.11	General remarks:	no toxicological data. Magnesium is non toxic. No toxic or chronic effects known. Product is not irritant.

12. Information on ecology

12.1	Degradation according to law on detergent (WRMG):	non applicable
12.2	Toxicity on fish:	non determined
12.3	behaviour in sewage plants:	R15: contact with water liberates highly flammable gases
12.4	Contain according to 76/464/EWG Regulation, heavy metals and the following compounds:	no dangerous components
12.5	AOX-value:	non determined
12.6	COD-value:	non determined
12.7	BOD-value:	non determined
12.8	General directions:	no ecological data. No harmful effects on environment

13. Directions for product waste disposal

13.1	Elimination/product:	Dispose of waste material as dangerous. Contact the supplier
13.2	Elimination/uncleaned packing:	The used packing must be emptied as much as possible; after appropriate cleaning the packing can be used again. The uncleanable packing must be eliminated to the same manner as the product. Dispose waste material with local, state and federal regulations.
13.3	Obligation to identify:	yes

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14. Information on transport

No. 4.3

No. 4.2



14.1 Land transport ADR/RID & GGVS/GGVE regulations

Class:	4.3 14b)
Danger no:	423
UN-No.:	1418
Transport documents:	1418 Magnesium powder Class 4.3 14b ADR
Packing :	Steel drums 1A2... max. 400 kg net
Danger :	4.3 4.2
Inscriptions:	UN 1418

14.2 Ship transport IMDG/GGVSEE regulations

Class:	4.3
UN-No.:	1418
Packing-group:	II
EMS-No.:	4.3-06
MFAG:	none
Marine pollutant:	
Proper shipping name:	Magnesium alloys powder

14.3 Air transport ICAO/IATA-DGR

Class:	4.3
UN/ID-No.:	1418
Packing-group:	II
Correct technical name:	Magnesium alloys powder

15.1 Regulations

15.1.1 Classification

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

Symbol of danger



F

Highly flammable

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15.1.2 Contain: magnesium alloys powder
EINECS: 231-104-6 CEE-Marking

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

15.1.4 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"

15.1.5 Special marking of certain preparations

15.2 National regulations (for Germany only)

15.2.1 Employment restriction acc. to Gefstoffv: to observe the employment restrictions

15.2.2 Regulation in case of disarrangement, limit: yes

15.2.3 Classification according to Vbf:

15.2.4 TA-Air-Class: 3.1.3

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

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

15.2.7 Other prescriptions, restrictions and prohibition:

16. Miscellaneous information: