

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 16.01.2009

Revision: 16.01.2009

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** Mischmetal, Cerium Mischmetal
- **REACH-Pre-registration number(s):**
 Cerium: 05-2114132079-53-0000
 Lanthanum: 05-2114132073-65-0000
 Neodymium: 05-2114132087-56-0000
 Praseodymium: 05-2114132095-59-0000
- **Application of the substance / the preparation** Raw material for industrial applications.
- **Manufacturer/Supplier:**
 Treibacher Industrie AG
 Auer von Welsbachstraße 1
 9330 Althofen
 Austria
 Telefon: +43 (0) 4262 505-0
 Fax: +43 (0) 4262 505-2005
 www.treibacher.com
- **Further information obtainable from:** msds@treibacher.com
- **Information in case of emergency:** +43 (0) 4262 505-0 (7:00 - 16:00) - Central European Time (CET)

2 Hazards identification

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**
 No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.

3 Composition/information on ingredients

- **Chemical characterization:**
- **Total Rare Earth (TRE):** min. 98%

· Components:			
CAS: 7440-45-1 EINECS: 231-154-9	Cerium	F; R 11-15	~ 47-75%
CAS: 7439-91-0 EINECS: 231-099-0	Lanthanum	F; R 11	~ 20-45%
CAS: 7440-00-8 EINECS: 231-109-3	Neodymium	F; R 11	~ 0-20%
CAS: 7440-10-0 EINECS: 231-120-3	Praseodymium	F; R 17	~ 0-10%
	Balance		

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:** Lumpy material causes no health hazards.
- **After inhalation:**
 Supply fresh air.
 Seek medical treatment in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Information for doctor:** Treat symptomatically.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
 Dry sand
 Fire-extinguishing powder
 Special powder for metal fires. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**
 Carbon dioxide
 Halogen extinguisher
 Water

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· Special hazards caused by the substance, its products of combustion or resulting gases:*In case of fire, the following can be released:**Toxic metal oxide smoke***· Protective equipment:***Wear self-contained respiratory protective device.**Wear fully protective suit.***· Additional information***Cover all exposed surfaces with sand, salt or metal-extinguisherpowder. Material should not be mixed until the material has been allowed to cool down.**Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.***6 Accidental release measures****· Person-related safety precautions:***Keep away from ignition sources.**Avoid formation of dust.**Wear protective clothing.***· Measures for environmental protection: No special measures required.****· Measures for cleaning/collecting:***Pick up mechanically.**Avoid formation of dust.**Send for recovery or disposal in suitable receptacles.**Dispose of the material collected according to regulations.***· Additional information: Keep away from water.****7 Handling and storage****· Handling:****· Information for safe handling:***Wear protective clothing.**Prevent formation of dust.**Provide suction extractors if dust is formed.**Handle under dry protective gas.***· Information about fire - and explosion protection:***Keep ignition sources away - Do not smoke.**Prevent impact and friction.**Use explosion-proof apparatus / fittings and spark-proof tools.***· Storage:****· Requirements to be met by storerooms and receptacles:***Keep container tightly sealed.**Store in dry conditions.***· Information about storage in one common storage facility:***Do not store together with oxidizing and acidic materials.**Store away from flammable substances.***8 Exposure controls/personal protection****· Additional information about design of technical facilities: Ensure good ventilation/exhaustion at the workplace.****· Ingredients with limit values that require monitoring at the workplace:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***· Additional information: The lists valid during the making were used as basis.****· Personal protective equipment:****· General protective and hygienic measures:***Do not eat, drink, smoke or sniff while working.**Wash hands before breaks and at the end of work.**Use skin protection cream for skin protection.***· Respiratory protection: Not necessary if room is well-ventilated.**

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· Protection of hands:


Protective gloves

· Material of gloves Wear gloves for the protection against mechanical hazards according to EN 388.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:


Safety glasses

· Body protection: Protective work clothing

9 Physical and chemical properties

· General Information	
Form:	Solid lumpy
Colour:	Grey
Odour:	Odourless
Melting point/Melting range:	~ 800°C (~ 1472°F)
Boiling point/Boiling range:	~ 3500°C (~ 6332°F)
· Flash point:	Not determined
· Flammability (solid, gaseous):	Lumpy: Product is not flammable. Powder: highly flammable.
· Danger of explosion:	Lumpy material does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined
Upper:	Not determined
· Oxidizing properties	Lumpy: none In form of powder: yes.
· Vapour pressure:	Not applicable
· Density:	typ. 6.6 g/cm ³
· Solubility in / Miscibility with water:	Insoluble.
· pH-value:	Not applicable
· Segregation coefficient (n-octanol/water):	Not applicable
· Viscosity:	
Dynamic:	Not applicable
Kinematic:	Not applicable

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

· Materials to be avoided:

Keep away from water.

Strong oxidizing agents.

· Dangerous reactions Reacts with strong oxidizing agents.

· Dangerous decomposition products: No dangerous decomposition products known.

· Additional information:

If Mischmetal gets inadvertently wet, put it on an absorptive material and dry it with warm air (not too hot).

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11 Toxicological information

- **Acute toxicity:**
The oxidizing decomposition products show following LD50-values (rat p. o.): > 1000 mg/kg (Pr, Nd) and > 5000 mg/kg (Ce, La).
- **on the skin:** *The inhalation of powder or dust may cause irritation of the respiration tract.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Other information (about experimental toxicology):** *Caution - substance not yet fully tested.*
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** *Not determined*

12 Ecological information

- **Information about elimination (persistence and degradability):** *Not determined*
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** *Not determined*
- **Ecotoxicological effects:**
- **Aquatic toxicity:** *Not determined*
- **Other information:** *At present there are no ecotoxicological assessments.*
- **Additional ecological information:**
- **AOX-indication:** *The product does not contain organically bounded halogens (AOX-free).*
- **General notes:** *Generally not hazardous for water*

13 Disposal considerations

- **Product:**
- **Recommendation**
Contact manufacturer for recycling information.
Mischmetal tends to oxidize. The formed oxides are mostly available in form of powder. Powder and swarf of Mischmetal have pyrophoric properties and spontaneous ignition is possible. Put small portions of about 100 g in 1 l saltwater (5 - 15 %) in a metallic vessel and place it outside buildings. Wait till the reaction process (hydrogen development) is finished, which may take a few days. The remaining sludge can be disposed of riskless. In case of doubt contact manufacturer or supplier.
Disposal must be made according to official regulations.
- **Waste disposal key:** 51310 (ÖNORM S 2100)
- **European waste catalogue** 06 03 16
- **Uncleaned packaging:**
- **Recommendation:**
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
Disposal must be made according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · Land transport ADR/RID (cross-border) · ADR/RID class: -
<ul style="list-style-type: none"> · Maritime transport IMDG: · IMDG Class: -
<ul style="list-style-type: none"> · Air transport ICAO-TI and IATA-DGR: · ICAO/IATA Class: -

- **Transport/Additional information:** *Not dangerous according to the above specifications.*

15 Regulatory information

<ul style="list-style-type: none"> · Sara
<ul style="list-style-type: none"> · Section 355 (extremely hazardous substances):
<p><i>None of the ingredients is listed.</i></p>

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· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	
7440-45-1	Cerium
7439-91-0	Lanthanum
7440-00-8	Neodymium
· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity to femals:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Cancerogenity categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· IARC (International Agency for Research on Cancer)	
None of the ingredients is listed.	
· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety and Health Administration)	
None of the ingredients is listed.	
· Canadian substance listings:	
· Canadian Domestic Substances List (DSL)	
All ingredients are listed.	
· Canadian Ingredient Disclosure list (limit 0.1%)	
None of the ingredients is listed.	
· Canadian Ingredient Disclosure list (limit 1%)	
None of the ingredients is listed.	

· **Labelling according to EU guidelines:**
 The substance is not subject to classification according to EU lists and other sources of literature known to us.

· **National regulations:**
 C.H.I.P.3 - The Chemicals (Hazard Information and Packaging Regulations) 2002 in the current version (GB)
 Occupational Exposure Limits EH40.2002

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant R-phrases**
- 11 Highly flammable.
- 15 Contact with water liberates extremely flammable gases.
- 17 Spontaneously flammable in air.

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· Department issuing MSDS:*HSE Department**Chemical Management***· * Data compared to the previous version altered.***Material Safety Data Sheet according to REACH, 1907/2006/EC*

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