

Printing date 09/21/2009

Reviewed on 09/21/2009

1 Identification of substance

- **Product details**
- **Product name:** Ferro Cerium
Lighter Flints
- **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
- **Information department:** msds@treibacher.com
- **Emergency information:** +43 (0) 4262 505-0 (7:00 - 16:00) - Central European Time (CET)

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Components:			
	Mischmetal (Rare Earth Metals)		min. 77%
CAS: 7439-89-6 EINECS: 231-096-4	Iron		~ 20%
CAS: 7439-95-4 EINECS: 231-104-6 Index number: 012-001-00-3	Magnesium	F; R 15-17	2%

- **Additional information:**

Rare Earth Metal contains:

Cerium (EINECS: 231-154-9; CAS: 7440-45-1)
Lanthanum (EINECS: 231-099-0; CAS: 7439-91-0)
Neodymium (EINECS: 231-109-3; CAS: 7440-00-8)
Praseodymium (EINECS: 231-120-3; CAS: 7440-10-0)

3 Hazards identification

- **Hazard description:** Not applicable.
- **Information pertaining to particular dangers for man and environment:**
No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Additional information:**
Lighter flints in the delivered form (cylindrical pieces) have no special risk.
Moderate risk of explosions of fine material.
Dust can have irritant effects to eyes and respiratory organs.

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4 First aid measures

- **After inhalation:**
Supply fresh air.
Seek medical treatment in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:** Treat symptomatically.

5 Fire fighting measures

- **Suitable extinguishing agents:**
Dry sand
Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:**
Water
Carbon dioxide
Halogen extinguisher
- **Special hazards caused by the material, 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-extinguisher powder. 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:**
Avoid formation of dust.
Keep away from ignition sources
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Use non-sparking tools, because the rubbing of the product with metallic objects may cause a formation of sparks.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Prevent formation of dust.
When working with powdered material it is recommended to use a dry inert gas atmosphere and a local explosion proof exhaust system.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Keep away from oxidizing agents.
Finely distributed particles may be flammable or explosive.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep receptacle tightly sealed.
Store in dry conditions.
- **Information about storage in one common storage facility:**
Store away from flammable substances.
Do not store together with acids.
Store away from oxidizing agents.

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Store away from water.

· **Further information about storage conditions:**

Protect from contamination.

Never store Lighter flints uncontrolled.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** Ensure good ventilation/exhaustion at the workplace.

· **Components 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 that were valid during the creation 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.

· **Breathing equipment:** Not necessary if room is well-ventilated.

· **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
Color:	Grey Different according to coloring
Odor:	Odorless
Melting point/Melting range:	ca. 700°C (ca. 1292°F)
Boiling point/Boiling range:	ca. 1100°C (ca. 2012°F)

· **Flash point:** Not applicable

· **Flammability (solid, gaseous):** Flammable.

· **Ignition temperature:** Solid material (flints): 400 °C
Powder: 195 - 280 °C

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Lighter flints: not applicable.
Powder: not determined.

· **Explosion limits:**
Oxidizing properties Lumpy: none
In form of powder: yes.

· **Density:** 6.5 g/cm³

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· Solubility in / Miscibility with Water:	<i>Insoluble.</i>
· pH-value:	<i>Not applicable</i>
· Segregation coefficient (n-octanol/water):	<i>Not determined</i>
· Viscosity:	
Dynamic:	<i>Not determined</i>
Kinematic:	<i>Not determined</i>

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** *Lumpy material is stable against corrosion.*
- **Materials to be avoided:**
Keep away from water.
Keep away from oxidising agents and acidic substances.
- **Dangerous reactions**
Reacts with strong oxidizing agents.
Reacts with water and acids.
- **Dangerous products of decomposition:** *No dangerous decomposition products known.*
- **Additional information:**
If a lighter flint gets inadvertently wet, put it on an absorptive material and dry it with warm air (not to hot).

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
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:** *No data available.*
- **on the eye:** *No data available.*
- **Sensitization:** *No sensitizing effects known.*
- **Other information (about experimental toxicology):** *Warning, substance not yet fully tested*
- **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** *Not determined*

12 Ecological information

- **Information about elimination (persistence and degradability):** *Not determined*
- **Behavior 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:**
Lighter flints tend to oxidize if they are stored for a longer time. 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 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

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- **Uncleaned packagings:**
- **Recommendation:**
 Packagings that cannot 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

- **Land transport ADR/RID (cross-border):**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

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

15 Regulations

- **Sara**

- **Section 355 (extremely hazardous substances):**
 None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**
 None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

7439-89-6	Iron
7439-95-4	Magnesium
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 for females:**
 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.

- **Carcinogeny 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.

- **MAK (German Maximum Workplace Concentration)**
 None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
 None of the ingredients is listed.

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· OSHA-Ca (Occupational Safety & 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.

· Product related hazard informations:

The product has not been classified and marked in accordance respective national laws.

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.

"Although TREIBACHER INDUSTRIE AG has attempted to provide current and accurate information herein, TREIBACHER INDUSTRIE AG makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person. Furthermore existing laws and directions have to be respected by the receiver of the product on his own responsibility".

· Department issuing MSDS:HSE Department
Chemical Management