

# SAFETY DATA SHEET

according  
to GB/T 16483 and GB/T 17519

Version 8.2  
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SDS No. Eternal-Element-ET-NdM-202501  
Product Number Eternal-Element-ET-NdM-202501

## Neodymium

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name : Neodymium

Product Number : ET-NdM-202501

Brand : Eternal-Element

CAS-No. : 7440-00-8

#### 1.2 Details of the supplier of the safety data sheet

Company : Shanghai Sheeny Metal Materials Co.,Ltd.

Room 210, Kedi Building,

No. 688 Huaijiang Road, Jiading District,

SHANGHAI

201800 SHANGHAI CHINA

上海斯年金属材料有限公司

上海市嘉定区华江公路688号凯迪大厦210室

邮政编码：201800

Telephone : +86 16602150044

Fax : +86 16602150044

#### 1.3 Emergency telephone

Emergency Phone # : +86 4006632276

#### 1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

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## SECTION 2: Hazards identification

### Summary of emergency

powder gray Flammable solid., Self-heating; may catch fire., Causes skin irritation., Causes serious eye irritation. Show this material safety data sheet to the doctor in attendance. After inhalation: fresh air. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. After eye contact: rinse out with plenty of water., Call in ophthalmologist., Remove contact lenses. After swallowing: immediately make victim drink water (two glasses at most)., Consult a physician. Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

### 2.1 GHS Classification

Flammable solids (Category 2), H228

Self-heating substances and mixtures (Category 1), H251

Skin corrosion/irritation (Category 2), H315

Serious eye damage/eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statement(s)

H228 Flammable solid.

H251 Self-heating; may catch fire.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statement(s)

Prevention

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P235 + P410 Keep cool. Protect from sunlight.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

P407 Maintain air gap between stacks/ pallets.

P420 Store away from other materials.

### Reduced Labeling (<= 125 ml)



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Pictogram



Signal Word

Danger

Hazard statement(s)

H228 Flammable solid.  
H251 Self-heating; may catch fire.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

Precautionary statement(s)

none

### 2.3 Physical and chemical hazards

H228 Flammable solid.  
H251 Self-heating; may catch fire.

### 2.4 Health hazards

H315 Causes skin irritation.  
H319 Causes serious eye irritation.

### 2.5 Environmental hazards

Referring to current information, no environmental hazard.

### 2.6 Other hazards - none

## SECTION 3: Composition/information on ingredients

Substance / Mixture : Substance

### 3.1 Substances

Formula : Nd  
Molecular weight : 144.24 g/mol  
CAS-No. : 7440-00-8  
EC-No. : 231-109-3

### Hazardous ingredients

| Component               | Classification  | Concentration |
|-------------------------|---|---------------|
| <b>Neodymium powder</b> | Flammable solids Category 2; Self-heating substances and mixtures Category 1; Skin corrosion/irritation Category 2; Serious eye damage/eye irritation Category 2A; H228, H251, H315, H319 | <= 100 %      |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### **General advice**

Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

After inhalation: fresh air.

#### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### **In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### **If swallowed**

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### 4.4 Notes to physician

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### **Suitable extinguishing media**

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

neodymium oxides

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.



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For personal protection see section 8.

#### **6.2 Environmental precautions**

Do not let product enter drains. Risk of explosion.

#### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

#### **6.4 Reference to other sections**

For disposal see section 13.

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### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

##### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

##### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

#### **7.2 Conditions for safe storage, including any incompatibilities**

##### **Storage conditions**

Tightly closed. Keep away from heat and sources of ignition.

Air and moisture sensitive.

##### **Storage class**

Storage class (TRGS 510) : 4.2 : Pyrophoric and self-heating hazardous materials

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### **SECTION 8: Exposure controls/personal protection**

#### **8.1 Control parameters**

##### **Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

#### **8.2 Exposure controls**

##### **Appropriate engineering controls**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

##### **Personal protective equipment**

###### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

###### **Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).



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Full contact  
Material : Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time : 480 min  
Material tested: KCL 741 Dermatril® L

Splash contact  
Material : Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time : 480 min  
Material tested: KCL 741 Dermatril® L

### **Body Protection**

Flame retardant antistatic protective clothing.

### **Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

|    |  |  |
|----|--|--|
| a) | Physical state                               | powder   |
| b) | Color  | gray   |
| c) | Odor   | No data available  |
| d) | Melting point/freezing point                 | Melting point/range : 1,021 °C - lit.  |
| e) | Initial boiling point and boiling range      | 3,074 °C - lit.  |
| f) | Flammability (solid, gas)                    | The substance or mixture is a flammable solid with the category 2. - Flammability (solids) |
| g) | Upper/lower flammability or explosive limits | No data available  |
| h) | Flash point                                  | Not applicable   |
| i) | Autoignition temperature                     | Self-heating; may catch fire.  |
| j) | Decomposition temperature                    | No data available  |
| k) | pH   | No data available  |
| l) | Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available           |
| m) | Water solubility                             | 0.1 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6- insoluble                     |
| n) | Partition coefficient:                       | Not applicable for inorganic substances  |



n-octanol/water

o) Vapor pressure No data available

p) Density 7.003 g/cm<sup>3</sup> at 25 °C - lit.  
Relative density No data available

q) Relative vapor density No data available

r) Particle characteristics No data available

s) Explosive properties No data available

t) Oxidizing properties none

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.2 Possibility of hazardous reactions

No data available

### 10.3 Conditions to avoid

no information available

### 10.4 Incompatible materials

Strong acids, Nitrogen, Strong oxidizing agents, Phosphorous acid, Halogens

### 10.5 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral : No data available

Inhalation : Irritating to respiratory system.

Dermal : No data available

#### Skin corrosion/irritation

Remarks: Causes skin irritation.

#### Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

RTECS : QO8575000

Rare earth compounds may cause delayed blood clotting leading to hemorrhages.

Inhalation of rare earths may cause sensitivity to heat, itching, and increased awareness of odor and taste.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**SECTION 12: Ecological information****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Endocrine disrupting properties**

No data available

**12.7 Other adverse effects**

No data available

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID : 3189

IMDG : 3189

IATA-DGR: 3189

**14.2 UN proper shipping name**

ADR/RID : METAL POWDER, SELF-HEATING, N.O.S. (Neodymium powder)



IMDG : METAL POWDER, SELF-HEATING, N.O.S. (Neodymium powder)  
IATA-DGR: Metal powder, self-heating, n.o.s. (Neodymium powder)

### 14.3 Transport hazard class(es)

ADR/RID: 4.2 IMDG: 4.2 IATA-DGR: 4.2

## 14.4 Packaging group

ADB/RID : II IMDG : II IATA-DGR : II

## 14.5 Environmental hazards

IMDG Marine pollutant: no IATA-DGR: no

## 14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Based on chemical properties, choose appropriate tools and conditions of transport. Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

## 14.7 Incompatible materials

Strong acids, Nitrogen, Strong oxidizing agents, Phosphorous acid, Halogens

## **SECTION 15: Regulatory information**

## **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

## National regulatory information

## Regulations on Safety Management of Hazardous Chemicals

## Catalogue of Hazardous Chemicals : Listed

## Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

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**SECTION 16: Other information**

## **Full text of H-Statements referred to under sections 2 and 3.**

|      |                                |
|------|--------------------------------|
| H228 | Flammable solid.               |
| H251 | Self-heating; may catch fire.  |
| H315 | Causes skin irritation.        |
| H319 | Causes serious eye irritation. |

## Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Eternal-Element Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www. eternal-element.com](http://www. eternal-element.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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