

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

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

Neodymium

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 Mateirals Co.,Ltd.

Room 210, Kedi Building,

No. 688 Huajiang 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
Neodymium powder		
	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.

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) 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.

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.

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.

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

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).

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

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

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
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 |



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n - octanol/water

- | | | |
|----|--------------------------|---|
| o) | Vapor pressure | No data available |
| p) | Density | 7.003 g/cm ³ 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

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

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: Q08575000

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.

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

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

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

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

ADR/RID : II

IMDG : II

IATA-DGR: II

14.5 Environmental hazards

ADR/RID : no

IMDG Marine pollutant: no

IATA-DGR: no

14.6 Special precautions for user

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.

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 and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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