

# SAFETY DATA SHEET

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

## Bismuth(III) oxide

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

#### 1.1 Product identifiers

Product name : Bismuth(III) oxide

Product Number : ET-Bi-202501  
Brand : Eternal-Element  
CAS-No. : 1304-76-3

#### 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

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## 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.

## SECTION 2: Hazards identification

### Summary of emergency

powder light yellow odorless May be harmful if swallowed. 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., Remove contact lenses. After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell. Not combustible. Ambient fire may liberate hazardous vapours. no information available

### 2.1 GHS Classification

Acute toxicity, Oral (Category 5), H303

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

### 2.2 GHS Label elements, including precautionary statements

Pictogram none

Signal Word Warning

Hazard Statements

H303 May be harmful if swallowed.

Precautionary Statements

Response

P312 Call a POISON CENTER/ doctor if you feel unwell.

### Reduced Labeling (<= 125 ml)

Pictogram none

Signal Word Warning

Hazard Statements

H303 May be harmful if swallowed.

Precautionary Statements none

### 2.3 Physical and chemical hazards

Referring to current information, no physical or chemical hazard.

### 2.4 Health hazards

H303 May be harmful if swallowed.

### 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

Synonyms : Dibismuth trioxide

Formula :  $\text{Bi}_2\text{O}_3$   
Molecular weight : 465.96 g/mol  
CAS-No. : 1304-76-3  
EC-No. : 215-134-7

#### Hazardous ingredients

Component	Classification	Concentration
<b>dibismuth trioxide</b>		
	Acute toxicity Category 5; H303	<= 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

#### 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. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### 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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

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

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

Bismuth oxides  
Not combustible.  
Ambient fire may liberate hazardous vapours.

## **5.3 Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus.  
none

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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. Evacuate the danger area, observe emergency procedures, consult an expert.  
For personal protection see section 8.

### **6.2 Environmental precautions**

No special precautionary measures necessary.

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

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**

For precautions see section 2.2.

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

#### **Storage conditions**

Tightly closed. Dry.

#### **Storage class**

Storage class (TRGS 510) : 11 : Combustible Solids

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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**

Change contaminated clothing. Wash hands 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

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### 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

No special precautionary measures necessary.

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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          | light yellow                |
| c) Odor           | odorless                    |
| d) Melting        | Melting point/range: 825 °C |

	point/freezing point	
e)	Initial boiling point and boiling range	No data available
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	No data available
i)	Autoignition temperature	No data available
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 - OECD Test Guideline 105- slightly soluble
n)	Partition coefficient: n-octanol/water	No data available
o)	Vapor pressure	No data available
p)	Density	8.93 g/cm <sup>3</sup> at 20 °C
	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	No data available

## 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 information available

### 10.3 Conditions to avoid

no information available

#### 10.4 Incompatible materials

No data available

#### 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

LD50 Oral - Rat - > 2,000 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

##### Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test

Result: No skin irritation

##### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

##### 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

Symptoms of chronic bismuth toxicity in humans consists of decreased appetite, weakness, rheumatic pain, diarrhea, fever, metal line on the gums, foul breathe, gingivitis, and dermatitis. Jaundice and conjunctival hemorrhage are rare, but have been reported. Bismuth nephropathy with proteinuria may occur. The kidney is the site of highest concentration with the liver being considerably lower. Bismuth does pass into the amniotic fluid and into the fetus., Kidney injury may occur., Liver injury may occur., 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**

Toxicity to fish LC50 - Fish - > 100 mg/l - 96 h  
(OECD Test Guideline 203)

**12.2 Persistence and degradability**

No data available

**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: -

IMDG: -

IATA-DGR: -

**14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA-DGR: -

**14.4 Packaging group**

ADR/RID: -

IMDG: -

IATA-DGR: -

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

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#### 14.6 Special precautions for user

#### 14.7 Incompatible materials

##### Further information

Not classified as dangerous in the meaning of transport regulations.

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### SECTION 15: Regulatory information

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

##### National regulatory information

##### Other regulations

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

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### SECTION 16: Other information

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

H303 May be harmful if swallowed.

##### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. 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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