

# SAFETY DATA SHEET

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

## Tellurium dioxide

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

#### 1.1 Product identifiers

Product name : Tellurium dioxide

Product Number : ET-Te-202501  
Brand : Eternal-Element  
CAS-No. : 7446-07-3

#### 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

## 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 May cause an allergic skin reaction., Harmful if inhaled., May damage fertility or the unborn child., May cause harm to breast-fed children., Toxic to aquatic life with long lasting effects. Show this material safety data sheet to the doctor in attendance. After inhalation: fresh air. Immediately call in physician., If breathing stops: immediately apply artificial respiration, if necessary also oxygen. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower., Consult a physician. 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. Not combustible. Ambient fire may liberate hazardous vapours. Exothermic reaction with: Aluminum, Zinc, Strong acids, Strong oxidizing agents

### 2.1 GHS Classification

Acute toxicity, Inhalation (Category 4), H332  
 Skin sensitization (Sub-category 1B), H317  
 Reproductive toxicity (Category 1B), H360  
 Effects on or via lactation, H362  
 Short-term (acute) aquatic hazard (Category 2), H401  
 Long-term (chronic) aquatic hazard (Category 2), H411

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 Statements

H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H360	May damage fertility or the unborn child.
H362	May cause harm to breast-fed children.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P263	Avoid contact during pregnancy/ while nursing.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response	
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P391	Collect spillage.
Storage	
P405	Store locked up.
Disposal	
P501	Dispose of contents/ container to an approved waste disposal plant.

#### Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard Statements

H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H360	May damage fertility or the unborn child.
H362	May cause harm to breast-fed children.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements none

### 2.3 Physical and chemical hazards

Referring to current information, no physical or chemical hazard.

### 2.4 Health hazards

H332	Harmful if inhaled.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H362	May cause harm to breast-fed children.

### 2.5 Environmental hazards

H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

### 2.6 Other hazards - none

## SECTION 3: Composition/information on ingredients

Substance / Mixture : Substance

### 3.1 Substances

Formula	: O <sub>2</sub> Te
Molecular weight	: 159.6 g/mol
CAS-No.	: 7446-07-3

EC-No. : 231-193-1  
Index-No. : 052-002-00-6

**Hazardous ingredients**

Component	Classification	Concentration
<b>tellurium dioxide</b>		
	Acute toxicity Category 4; Skin sensitization Sub-category 1B; Reproductive toxicity Category 1B; Effects on or via lactation ; Short-term (acute) aquatic hazard Category 2; Long-term (chronic) aquatic hazard Category 2; H332, H317, H360, H362, H401, H411	<= 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. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

**In case of skin contact**

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

**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**

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

Tellurium oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

### 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.

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. 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.

### 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 carefully. 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 safe handling**

Work under hood. Do not inhale substance/mixture.

#### **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. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

### Storage class

Storage class (TRGS 510) : 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
tellurium dioxide	7446-07-3	PC-TWA	0.1 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

### 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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min  
Material tested: KCL 741 Dermatril® L

### Body Protection

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.

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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   | No data available  |
| d) Melting point/freezing point                 | Melting point/range: 733 °C - lit.   |
| e) Initial boiling point and boiling range      | 1,245 °C at 1,013 hPa - (ECHA)   |
| f) Flammability (solid, gas)                    | The product is not flammable. - Flammability (solids)                                    |
| g) Upper/lower flammability or explosive limits | No data available  |
| h) Flash point                                  | Not applicable   |
| i) Autoignition temperature                     | < 400 °C<br>at 1,013 hPa - Relative self-ignition temperature for solids does not ignite |
| 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                             | 0.0025 g/l at 23 °C - OECD Test Guideline 105  |
| n) Partition coefficient: n-octanol/water       | Not applicable for inorganic substances  |
| o) Vapor pressure                               | No data available  |
| p) Density                                      | 5.67 g/mL 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

Exothermic reaction with:  
Aluminum  
Zinc  
Strong acids  
Strong oxidizing agents

### 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 - male and female - > 5,000 mg/kg  
(OECD Test Guideline 423)

LD50 Oral - Rat - > 2,000 mg/kg  
(OECD Test Guideline 401)

LD50 Oral - Rat - > 5,000 mg/kg

Remarks: Diarrhea

LC50 Inhalation - Rat - male and female - 4 h - 2.420 mg/l - dust/mist

(OECD Test Guideline 403)

Dermal: No data available

**Skin corrosion/irritation**

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation  
(OECD Test Guideline 439)

**Serious eye damage/eye irritation**

Eyes - Chicken eye

Result: No eye irritation  
(OECD Test Guideline 438)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: positive  
(OECD Test Guideline 429)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster fibroblasts

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

May damage the unborn child.

Suspected of damaging fertility. Studies indicating a hazard to babies during the lactation period

**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: WY2675000

prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	semi-static test - Oncorhynchus mykiss (rainbow trout) - 46.4 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 7.24 mg/l - 48 h (OECD Test Guideline 202)
	static test NOEC - Daphnia magna (Water flea) - 4.55 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 14.7 mg/l - 72 h (OECD Test Guideline 201)
	static test NOEC - Pseudokirchneriella subcapitata (green algae) - 4.17 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - 320 mg/l - 3 h (OECD Test Guideline 209)

### 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.

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

ADR/RID: 3077

IMDG: 3077

IATA-DGR: 3077

**14.2 UN proper shipping name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tellurium dioxide)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (tellurium dioxide)

IATA-DGR: Environmentally hazardous substance, solid, n.o.s. (tellurium dioxide)

**14.3 Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA-DGR: 9

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA-DGR: III

**14.5 Environmental hazards**

ADR/RID: yes

IMDG Marine pollutant: yes

IATA-DGR: yes

**14.6 Special precautions for user****14.7 Incompatible materials****Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids. Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

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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****Law on the Prevention and Control of Occupational Diseases****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.**

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H360 May damage fertility or the unborn child.

H362 May cause harm to breast-fed children.

H401 Toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

**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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