



# Materials Safety Data Sheet

Alumina-doped Zinc Oxide Solid (Granules,Target)

## 1. Product and Company Identification

Product Name: Alumina-doped Zinc Oxide

Formula:  $\text{Al}_2\text{O}_3\text{-ZnO}$

CAS: 37275-76-6

EC No.: N/A

Synonyms: AZO, Aluminum zinc oxide

Recommended Use: Scientific research

Uses advised against: N/A

Supplier: UltraPurMat Group Co., Ltd

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Xi'an Shaanxi China

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## 2. Hazards Identification

### Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP).

Acute aquatic toxicity Category 1 (H400)

Chronic aquatic toxicity Category 1 (H410)

### GHS Label elements, including precautionary statements

Pictogram :



Signal Word: Warning

Hazard statement(s):

H410 Very toxic to aquatic life with long lasting effects

Precautionary Statement(s):

P273 Avoid release to the environment.

P391 Collect spillage

P501 Dispose of contents/container in accordance with local/regional/national/international regulations

**Other hazards:** This product does not contain any known or suspected endocrine disruptors.

### 3. Composition

| Components                                                     | CAS        | Classification (H) | Concentration |
|----------------------------------------------------------------|------------|--------------------|---------------|
| Alumina-doped Zinc Oxide (Al <sub>2</sub> O <sub>3</sub> /ZnO) | 37275-76-6 | H400 H410          | ≤100%         |

### 4. First Aid Procedures

#### Description of first aid measures

**General Treatment:** Seek medical attention if symptoms persist.

**Inhalation:** Move the affected person to fresh air. If breathing is difficult, seek medical attention.

**Ingestion:** Seek medical attention.

**Skin:** Wash affected area with mild soap and water. Remove any contaminated clothing.

**Eyes:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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

No data available

### 5. Firefighting Measures

#### Extinguishing media

**Extinguishing Media:** The product itself does not burn. Use suitable extinguishing agent for surrounding material and type of fire.

**Unsuitable extinguishing media:** water jet

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

No data available

#### Advice for firefighters

Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

#### Further information

No data available

## 6. Accidental Release Measures

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

Use personal protective equipment. Avoid formation of dust. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection, see section 8.

### **Environmental precautions**

Isolate runoff to prevent environmental pollution.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **Reference to other sections**

For disposal see section 13.

## 7. Handling and Storage

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### **Precautions for safe handling**

Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid formation of dust. Do not get in eyes, on skin, or on clothing. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. For precautions see section 2.

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

Store in a cool, dry and well-ventilated place in tightly closed containers.

Store apart from materials and conditions listed in section 10.

### **Specific end use(s)**

Apart from the uses mentioned in section 1 no other specific uses are stipulated

## 8. Exposure Controls/Personal Protection

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### **Exposure controls**

#### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment**

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

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

##### **Skin protection**

Protective gloves complying with applicable requirements of Regulation (EU) 2016/425 and EN ISO 374.

##### **Body Protection**

Protective work clothing. Wear close-toed shoes and long sleeves/pants.

##### **Respiratory protection**

Use a respirator with type N95 (USA) or P2/P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards

**Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. Physical and Chemical Characteristics

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**Information on basic physical and chemical properties**

Appearance

Form: Solid (Granules,Target)

Colour: Gray black

Odor: Odorless

pH: Not applicable (solid)

Melting point/range: 1975°C

Boiling point/range: No data available

Flash point: No data available

Evaporation rate: Not applicable-Solid

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Relative density: No data available

Water solubility: (practically insoluble)

Partition coefficient: n-octanol/water: not relevant (inorganic)

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

**Other information**

Molecular formula:  $\text{Al}_2\text{O}_3/\text{ZnO}$

Molecular weight: No data available

## 10. Stability and reactivity

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**Reactivity**

This material is not reactive under normal ambient conditions.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No known hazardous reactions

**Conditions to avoid**

No information available.

**Incompatible materials**

No information available.

## **Hazardous decomposition products**

In the event of fire: see section 5

## **11. Toxicological Information**

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### **Information on toxicological effects**

#### **Acute toxicity**

No data available

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

No data available

#### **Respiratory or skin sensitisation**

No data available

#### **Germ cell mutagenicity**

No data available

#### **Carcinogenicity**

IARC: Not listed.

OSHA: Not listed.

#### **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

#### **Additional Information**

No data available

Based on available data, the classification criteria for health hazards are not met.

## **12. Ecological Information**

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### **Toxicity**

No specific ecotoxicity data are available for the product. The product is classified as Aquatic Acute 1 and Aquatic Chronic 1 based on available information.

### **Persistence and degradability**

No data available

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Results of PBT and vPvB assessment**

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

#### **Other adverse effects**

This product does not contain any known or suspected endocrine disruptors.

### **13. Disposal Considerations**

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#### **Waste treatment methods**

Dispose of contents/container in accordance with applicable local, regional, national and international regulations. Recovery or recycling should be considered where feasible. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste.

### **14. Transportation Information**

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#### **ADR**

Not classified as dangerous goods under ADR

#### **IMDG**

Not classified as dangerous goods under IMDG

#### **IATA**

Not classified as dangerous goods under IATA

### **15. Regulatory information**

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

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: Not applicable

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: Not applicable

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021: Not applicable

#### **Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance

### **16. Other information**

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**Revision Date:** 2026-08-17

**Version:** 1.0

#### **Disclaimer**

The information of this safety data sheet is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing

his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.