

# **Material Safety Data Sheet**

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND  
COMPANY/UNDERTAKING  
**PRODUCT NAME: ZINC OXIDE**
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## **PRODUCT USE:**

Rubber products, chemical products, ceramics, paints & coatings, pharmaceuticals and many others

## **2. COMPOSTION/INFORMATION ON INGREDIENTS**

Composition: ZnO (Zinc oxide) 87 to 100 %

CAS N°1314 – 13 – 2

EC N°215 – 222 – 5

## **3. HAZARDS IDENTIFICATION**

This health hazard assessment is based on a consideration of the composition of this product.

**EC-Classification (67/548/EEC)**

**Hazard symbol (-s):** N

Dangerous for the environment

Risk phrases

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects the aquatic environment.

Safety phrases

S60: This material ad its container must be disposed of as hazardous waste.

S61: Avoid release to the environment. Refer to special instruction/Safety data sheets

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E-Classification (2008/1272/EEC)

Aquatic acute 1

Aquatic chronic 1

Signal word: Warning

**Hazard statements:**

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P273: Avoid release to the environment.

P391: Collect spillage.

501: Dispose of contents/container according to national/regional regulations.

#### **4. First Aid Measures**

**Inhalation:** Remove patient from exposure, keep warm and at rest. Obtain medical attention if ill effects occur.

**Skin Contact:** Remove contaminated clothing. Wash skin with water.

If symptoms develop, obtain medical attention. Contaminated clothing should be laundered before re-issue.

**Eye Contact:** Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain medical attention.

**Ingestion:** Do not induce vomiting. Wash out mouth with water and give 200-300ml of water to drink. Obtain medical attention.

## **Further Medical Treatment**

Symptomatic treatment and supportive therapy as indicated.



### **5. FIRE-FIGHTING MEASURES**

Non-combustible

Extinguishing Media: As appropriate for surrounding materials/equipment

Fire Fighting Protective Equipment: A self container breathing apparatus and suitable protective clothing should be worn in fire conditions.

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### **6. ACCIDENTAL RELEASE MEASURES**

Do not allow to enter drains, sewers or watercourses

Clear up spillages by mechanical means.

Control dust formation.

Transfer to a container for disposal or recovery.

Ensure suitable personal protection (including respiratory protection) during removal of spillages.

### **7. HANDLING AND STORAGE**

#### **7.1 HANDLING**

Control dust formation.

Avoid contact with skin and eyes.

Avoid inhalation of high concentrations of dusts. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

### **Process Hazards**

Prior to discharge the material may contain residual organic chemicals or deposited organic chemical hydrocarbons and should be regarded as potentially flammable. Material used for this purpose should be purged free of organic materials and cooled with an inert gas before it is discharged.

### **7.2 STORAGE**

Keep away from heat and direct sunlight. Keep container in well ventilated places if unloaded from shipping containers. If storing in shipping containers until use keep shipping containers closed. The material should be stored in the sealed mild steel or plastic containers in which it is supplied.

Storage Temperature:  $<60^{\circ}\text{C}$

### **8. EXPOSURE CONTROL/PERSONAL PROTECTION**

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Exposure limits: Zinc (oxide): VME 10mg/m<sup>3</sup> (dust) - 5mg/m<sup>3</sup> (smokes) (DSD 67/548/CEE)

Personal protective equipment:

Eye protection: Wear approved chemical safety goggles (EN 166)

-Respiratory protection:

Provide adequate general and local exhaust ventilation. No recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists. Your safety equipment supplier should be consulted as to the choice of the most suitable type (FFP2)

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-Hygienic work routines: Cleanse skin thoroughly after work and before breaks. Do not breathe dust. Change clothing daily before leaving work.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                       |                                      |
|-----------------------|--------------------------------------|
| Appearance:           | Solid Granular                       |
| Colour:               | Yellowish                            |
| Odour:                | Odourless or no characteristic odour |
| Melting point:        | 1975°C                               |
| Explosive properties: | Not Explosive                        |
| Bulk density:         | 1.20 – 1.40 Kg/l                     |
| Solubility: in water  | Slightly soluble in water            |

## 10. STABILITY AND REACTIVITY

|                      |   |
|----------------------|---|
| Stability:           | The product is stable under normal temperature and pressure |
| Conditions to avoid: | Avoid contact with acids                                    |
| Material to avoid:   | Strong Acids  |

Hazardous decomposition products: No hazardous decomposition products

## 11. TOXICOLOGICAL INFORMATION

This health hazard assessment is based upon a consideration of the composition of this product.

### Inhalation

High concentrations of dust may be an irritant to the upper respiratory tract. Dust may enter the lungs and be slow to clear. High concentrations of very finely divided dust may produce symptoms of “metal fume fever”. This condition is characterised by influenza type symptoms occurring a few hours after exposure and lasting up to 48 hours.

### Skin Contact

Repeated and/or prolonged skin contact may cause irritation

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**Eye Contact**

May cause eye irritation.

May cause physical abrasion in contact with eyes.

**Ingestion**

Ingestion may cause irritation of the gastrointestinal tract. May cause nausea, vomiting and diarrhoea.

**Long Term Exposure**

No information available. The components of this material have been in use for many years with no evidence of adverse effects.

**12. ECOLOGICAL INFORMATION**

**Environmental Fate and Distribution**

Ecotoxicity: It is very toxic to aquatic organisms. Since it takes very long time for zinc oxide to break down, it may cause adverse long-term effects in the aquatic environment.

Degradability: The products of degradation are less toxic than the product itself.

**13. DISPOSAL CONSIDERATIONS**

Dispose of through the metal recovery industry. Disposal should be in accordance with local, state or national legislation. Can be land filled if local regulations allow. Used catalyst may have different hazards or properties from new material. This safety datasheet does not apply to used catalyst.

**14. TRANSPORT INFORMATION**

Environmentally hazardous substance, solid, n.o.s (zinc oxide), 9, III

UN-Number: UN3077

US HM-181 Not regulated

DOT Classification Hazard class: XCP; NOT REGULATED FOR DOMESTIC TRANSPORT

TDG Classification Not regulated

IMO/IMDG: Class 9 +MP, Packing group 3

IATA-DGR: Class 9, Packing group 3

EU ADR: Class 9, Code M7, Packing group III



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**15. REGULATORY INFORMATION**

CEE (EINECS) N°:215 -222-5



Labelling:

DSCL (EEC): R50/53: very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment

EU regulations: DSD 67/548/CEE

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