

MANUFACTURER OF ZINC OXIDE An ISO 9001:2015 Certified Company An ISO 14001-2015 Certified Company

Survey No. 241 Paikee, Village Chadasna, 1Km behind Torrent Pharmaceuticals Ltd., Ahmedabad - Mehsana Highway, Taluka - Kadi, District - Mehsana, Gujarat - 382715

Website: <a href="www.uizincoxide.com">www.uizincoxide.com</a> Email: <a href="mailto:upperindia@uizincoxide.com">upperindia@uizincoxide.com</a> Phone No.:+91-27642-91117

#### MATERIAL SAFETY DATA SHEET

## 1. Identification of the Substance/ Mixture and of the Company/ Undertaking

#### 1.1. Product Identifier

Chemical Name : Zinc Oxide

Trade Name (Synonym) : Zinc Oxide, Zink Oxid, Oxyde De Zinc, Ossido Di Zinco, Zinkoxide, Oxido Del Cinc, Tlended

Cynku, Chinese White

Chemical Family : Non-Ferrous Metal Oxide

Chemical Formula : ZnO
CAS Number : 1314-13-2
EINCES Number : 215-222-5

REACH Registration : 01-2119463881-32-190

## 1.2. Relevant identified uses of the substance/mixture and uses advised against in EEA member countries, use in restricted to only uses registered under REACH.

- Colouring agents, pigments
- Food/ Feedstuff additives
- · Fuels and fuel additives
- Intermediates
- Laboratory Chemicals
- · Lubricants and lubricant additives
- Plating agents and metal surface treating agents
- Process regulators
- Components in batteries
- Corrosion inhibitors and anti-scaling agents
- Fertilizers
- Pharmaceuticals substance
- Photosensitive agents and photo-chemicals
- Process regulators, used in vulcanization or polymerization processes
- Processing aid, not otherwise listed
- Semiconductors

### 1.3. Details of the supplier of the data sheet

Supplier Name : Upper India Inorganic Industries Ltd.

Supplier Address : Survey No. 241 Paikee, Village – Chadasna, 1 km behind Torrent Pharmaceuticals Ltd.,

Ahmedabad – Mehsana Highway, Taluka – Kadi, District – Mehsana, Gujarat – 382715, India

Contact Email : systems.uiiil@uizincoxide.com

Contact Phone : +91-99786-29532

#### 1.4. Emergency Contact

Contact Phone : +91-99786-29532 Contact Person : Factory Manager



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## 2. Hazards Identification

## 2.1. Classification of the substance or mixture

## Classification (Regulation (EC) No 1272/2008)

Short term (acute) aquatic : H400 : Very toxic to aquatic life.

environment toxicity, Category 1

Long term (chronic) aquatic : H410 : Very toxic to aquatic life with long lasting effects.

environment toxicity, Category 1

#### 2.2. Label Elements

## Labelling (Regulation (EC) No 1272/2008)

Hazard pictograms

Signal Word : Warning

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

Precautionary Statement : **Prevention** 

P273 : Avoid release to the environment.

: Response

P391 : Collect Spillage.

: Disposal

P501 : Dispose of Contents/container to an approved waste disposal plant.

## 2.3. Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### 3. Chemical Composition of Ingredients

Chemical Name : Zinc Oxide

Trade Name (Synonym) : Zinc Oxide, Zink Oxid, Oxyde De Zinc, Ossido Di Zinco, Zinkoxide, Oxido Del Cinc, Tlended

Cynku, Chinese White

Chemical Formula : ZnO

Molecular Weight : 81.38

Content (%) : 100%

CAS Number : 1314-13-2

EINCES Number : 215-222-5



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## 4. First Aid Measures

#### 4.1. Description of First Aid Measures

**Skin Contact** : Immediately wash with soap and water. Seek medical attention if irritation occurs. **Eye Contact** : Immediately flush eyes with plenty of water. Seek medical attention if irritation occurs. Ingestion

: Drink plenty of water. Do not induce vomiting. Seek medical attention if irritation occurs or

contact Poison Control

Inhalation : Remove victim to fresh air. Seek medical attention if feeling unwell or experiencing

respiratory distress.

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

Acute : Dry Cough, headache and/or throat irritation. Delayed : No delayed symptoms of effects expected.

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

Bad cough, headache and/or nausea. Move affected individual to fresh air.

#### 5. Fire Fighting Measures

#### 5.1. Extinguishing Media

Suitable Extinguishing Media : Product is not flammable. Use an extinguishing media suitable for the surrounding fire.

Unsuitable Extinguishing Media : None Known

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

Hazards from the substance : Water contaminated with this material must be contained and prevented from being

discharged to environment.

Hazardous thermal : Decomposition products may include Zinc Oxide fumes at high temperature. decomposition products

## 5.3. Advice for fire-fighters

Special protective actions for

fire-fighters

Special protective equipment

for fire-fighters

: No special measures required.

: Suitable breathing apparatus.



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#### 6. Accident Release Measures

#### 6.1. Personal Precautions

Avoid breathing dust. Refer to section 7 and section 8 for advice on handling/storage and PPE.

#### 6.2. Environmental Precautions

Prevent contamination of soil, drains and surface water. Inform relevant authorities of spill wherever required.

#### 6.3. Spill Cleanup Recommendation

Avoid dry sweeping or other methods which raise dust. Vacuum or wet-sweep and place into a suitable closable and labelled container for disposal. Dispose of waste via licensed waste disposal contractor.

#### 7. Handling and Storage

#### 7.1. Precautions for Safe Handling

This product should be used in accordance with good industrial safety practices and industrial hygiene standards and all local, state and international regulations. Avoid creating airborne dust. Ensure adequate exhaust ventilation. Workers who handle material should wear gloves and thoroughly wash hands/forearms after exposure. See Section 8.2 if exposure exceeds limits.

## 7.2. Conditions for Safe Storage/Instabilities

This product should be stored in accordance with all local, state and international regulations. Store under ambient conditions and keep packaging free from high moisture areas in a well-ventilated space sealed tightly in the original containers. Once original containers are opened, all product must be used or remaining product must be placed in tightly sealed containers. Protect containers from damage and repair if damage occurs. If product is shipped in IBC bulk packaging, the inner plastic liner may be closed tightly and be considered a closed container. Use all product within 1 year of shipping date.

### 8. Exposure Controls/ Personal Protection

## 8.1. Control Parameters

Contains no substances with occupational exposure limit values.

## Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance Name	End Use	Routes of Exposure	Potential Health Effects	Value
Zinc Oxide	Workers	Inhalation	Long-term exposure, Systematic effects	5 mg/m3
	Workers	Inhalation	Long-term exposure, Local effects	0.5 mg/m3
	Workers	Dermal	Long-term exposure, Systematic effects	83 mg/m3
	Consumers	Inhalation	Long-term exposure, Systematic effects	2.5 mg/m3
	Consumers	Dermal	Long-term exposure, Systematic effects	83 mg/m3
	Consumers	Oral	Long-term exposure, Systematic effects	0.83 mg/m3



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## Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance Name	<b>Environmental Compartment</b>	Value
Zinc Oxide	Fresh Water	0.0206 mg/l
	Sea Water	0.0061 mg/l
	Sewage Treatment Plant	0.1 mg/l
	Fresh Water Sediment	117.8 mg/kg dry weight
	Sea Sediment	56.5 mg/kg dry weight
	Soil	35.6 mg/kg dry weight

#### 8.2.Exposure Controls

Respiratory Protection : Avoid creating dust. If exposure levels exceed limits, respiratory protection approved for the

work being performed must be worn.

Hand Protection : Always wear glove approved for the work being performed when handling Zinc Oxide

Skin Protection : Wear normal chemical work clothing.

Eye Protection : Always wear approved protective eyewear if there is a potential for dust being created

while handling the material.

General Protective Hygiene

Measures

: Use local exhaust ventilation to pro-actively reduce dust levels.

## 9. Physical and Chemical Exposure Controls/ Personal Protection

Appearance : White, cream or yellow
 Typical Particle Size : d50 typically 1 um

Flammability Limits : Zinc Oxide is not flammable
 Explosive Limits : Zinc Oxide is not explosive

Odor : Odorless

• Vapour Pressure : @ 1500 C = 12 mm HG

Odor Threshold : Odorless
 Vapour Density : 5.6 g/cm³
 pH : Neutral
 Relative Density : Varies
 Melting Point : 1975 °C
 Solubility in Water : 2.9 mg/L
 Boiling Point : N/A

Flash Point : Not Flammable

Evaporation Rate : N/A
 Specific Gravity : 5.68
 Molecular Weight : 81.38

Suggested Solvents : Acids and bases
 Fire Qualities : Will not burn
 Explosive Qualities : Not Explosive
 Volatile : 0.3% Nominal



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## 10. Stability and Reactivity

: This product is stable under normal and dry conditions. Reactivity

: This product is stable. **Chemical Stability** 

: None. Possibility of Hazardous

reactions

Conditions to avoid or incompatible materials

Hazardous decomposition

products

: Potential for Zinc Oxide fumes at elevated temperatures.

: Heated Magnesium. Chlorinated rubbers above 215°C.

## 11. Toxicological Information

### 11.1. Information on Toxicological Effects

Routes of Entry : Oral, Inhalation

**Acute Oral Toxicity** : LD50 (Rat, male and female): > 5.000 mg/kg **Acute Inhalation Toxicity** : LC50 (Rat, male and female): > 5.7 mg/l **Acute Dermal Toxicity** : LD50 (Rat, male and female): > 2.000 mg/kg

Serious Eye Damage/ Eye

Irritation

: No eye irritation observed

Mutagenicity : No Data available Carcinogenicity : No Data available Reproductive Toxicity : No Data available **Aspiration Hazard** : No Data available

#### 11.2. Acute Exposure Symptoms

**Eye Contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may

cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may

cause irritation of the respiratory tract.

Skin Contact : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Serious Eye Damage/ Eye

Irritation

: No known significant effects or critical hazards.

## 12. Ecological Information

#### 12.1. Toxicity

Toxicity to fish LC50 – Oncorhynchus mykiss (rainbow trout) – 1.1 mg/I – 96 h.

Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water Flea)-0.098 mg/l-48 h.

Acute EC50-Algae Selenastrum Capricornutum-0.17 mg/l-72 h.



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## 12.2. Persistence and degradability

Not rapidly degradable.

#### 12.3. Bio accumulative potential

No evidence to indicate significant bioaccumulative potential.

#### 12.4. Mobility in soil

No evidence to indicate significant mobility in soil.

#### 12.5. Results of PBT and vPvB assessment

Zinc Oxide is not persistent, bioaccumulative and toxic (PBT) and very persistent and very bioaccumulative (vPvB).

### 12.6. Other adverse effects

None.

## 13. Disposal Considerations

## 13.1. Waste treatment methods Product

Generation of product waste should be minimized wherever possible. Disposal of product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements. Dispose of surplus and non-recyclable products via licensed waste disposal contractor. Waste should not be released into sewer system unless regulations permit such release.

## **Containers/ Packaging**

Generation of packaging waste should be minimized wherever possible. Waste packaging should be recycled when possible. Incineration and/or landfill dumping should only be considered when recycling isn't feasible. Make sure to follow all local, state and international regulations when disposing packaging materials.



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## 14. Transport Information

	ADR/RID	IMDG	IATA
UN Number	UN3077	UN3077	UN3077
UN proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (ZINC OXIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (ZINC OXIDE), MARINE POLLUTANT (ZINC OXIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (ZINC OXIDE)
Transport Hazard Class(es)			
	Hazard Identification Number : 90	Sea (IMO) : DG, MP	IATA Label : Miscellaneous
Transport Hazard Class	9	9	9
Packing Group	III	III	III
Environmental Hazards	Yes	Yes, Dangerous to the environment	Yes
Special precautions for users	No	No	Yes (see below)
Additional Information	Tunnel Code (E)		
IATA special precaution for	IATA – Passenger Aircraft:		400kg (packing group 956)
users	IATA – Cargo Aircraft: 400kg (packing gro		

<sup>\*</sup>The EU diamond for Dangerous to the Environment has a red border. A copy of this document may not be in colour resulting in the above border incorrectly being displayed in black.

#### 15. Regulatory Information

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

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals And Precursors : Not applicable.

REACH – Candidate List of Substances of Very High Concern for Authorization (Article 59) : This product does not contain substances of very high concern

(Regulation (EC) No. 1907/2006 (REACH), Article 57).

REACH – List of Substances subject to authorization (Annex XIV)

: Not applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable.



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Regulation (EC) No 850/2004

on persistent organic

pollutants

: Not applicable.

Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

: Neither banned or restricted.

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of

dangerous chemicals

: Not applicable.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and article (Annex XVII)

: Not applicable.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major accident hazards involving dangerous substances.

#### 15.2. Chemical Safety Assessment

Not applicable

## 16. Other Information

## **Full text of H-Statements**

H400 : Very toxic to aquatic life

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

## Full text of other abbreviations

**Aquatic Acute** : Short-term (acute) aquatic hazard **Aquatic Chronic** : Long-term (chronic) aquatic hazard IATA : International Air Transport Association **IMDG** : International Maritime Dangerous Goods **PBT** : Persistent, Bioaccumulative and Toxic vPvB : Very Persistent and Very Boiaccumulative



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## **Further Information**

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe in terms of their safety requirements. The given details do not imply any guarantee concerning the composition, properties or performance.