

## SAFETY DATA SHEET

### Zinc Oxide

#### 1. Identification of the substance/preparation and of the company/undertaking

AU

##### Identification of the substance or preparation

**Product name** : **Zinc Oxide**  
**IPDS Code** : 93719290  
**Common / Trade name** : Red Seal, White Seal, Pharmaceutical, Pharmaceutical BP, Neige B, Pharma B, Zinc Oxide EPM, Zinc Oxide Pharma GMP 3-S5  
**Use of the substance/preparation** : Industrial applications: Production of rubber. Production of tyres. Varistors. Ceramics. Glass. Manufacture of chemicals. Manufacture of Lubricants. Agricultural industry Ferrites. Manufacture of cosmetics. Veterinary Product. Pharmaceuticals. Plastics. Glues. Pigments to paint and printing inks. Enamels.

##### Company/undertaking identification

**Supplier** : Umicore Marketing Services Australia Pty Ltd  
 1/49 Calarco Drive,  
 Derrimut, Victoria, 3030  
 Australia  
 Telephone: (+613) 8348 8900

**e-mail address of person responsible for this SDS** : info.ipds@umicore.com

**Emergency telephone Number** : Carechem24: + 65 62 64 78 36  
 Contact local supplier or distributor (during business hours)

#### 2. Hazards identification

**GHS Classification** : Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

**GHS Hazard Category** : Acute hazard to the Aquatic Environment – Category 1  
 : Long-term hazard to the Aquatic Environment – Category 1

**Pictograms** : Environment



**Signal Word** : Warning

**Hazard Statements** : **H410** Very toxic to aquatic life with long lasting effects

**Precautionary Statements** : Prevention **P273** Avoid release to the environment  
 Response **P391** Collect spillage  
 Disposal **P501** Dispose of contents/container in accordance with local / regional / national / international Regulations.

**National Transport Commission(Australia)** : Australian Code for the Transport of Dangerous Goods By Road and Rail (ADG Code)

**Dangerous Goods Classification** : Non-Hazardous substance, Non-Dangerous Goods Grade according to the criteria of the Australian Code for the Transport of Dangerous Goods By Road and Rail (ADG Code) - [as per ADG 7.4 Edition - SP AU01(page 623) ]

**See section 11 for more detailed information on health effects and symptoms**

### 3. Composition / information on ingredients

Substance / preparation : Mono-constituent substance

Ingredient name	CAS number	%	EINECS number
Zinc Oxide	1314-13-2	>99	215-222-5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

\*Occupational Exposure Limit(s), if available, are listed in section 8

### 4. First aid measures

#### First aid measures

- Inhalation** : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial Respiration. Obtain medical attention.
- Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material are swallowed, call a physician immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation occurs.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs
- Notes to physician** : Not available.

See section 11 for more detailed information on health effects and symptoms.

### 5. Fire-fighting measures

#### Extinguishing media

- Suitable** : Use an extinguishing agent suitable for surrounding fires.
- Not suitable** : None known
- Special exposure hazards** : No specific fire or explosion hazard.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

See section 11 for more detailed information on health effects and symptoms.

- Hazardous combustion Products** : Decomposition products may include the following materials :  
metal oxide/oxides

- Special protective equipment for fire-fighters'** : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

- Hazchem Code** :

### 6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

**Methods for cleaning up** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

## 7. Handling and storage

**Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Refer to special instructions/safety data sheet. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination

**Additional information** : Keep away from acids. Keep away from alkalis.

**Packaging materials Recommended** : Use original container.

## 8. Exposure controls/personal protection

### Occupational exposure limits

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
zinc oxide	<b>SWA (Australia, 8/2005).</b> TWA: 10 mg/m <sup>3</sup> 8 hour(s). Form: Dust STEL: 10 mg/m <sup>3</sup> 15 minute(s). Form: Fume TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Fume

### Exposure Controls

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

<b>Skin</b>	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Gloves : Use cotton or leather gloves.
<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
<b>Hygiene measures</b>	
<b>General Information</b>	Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Workers should wash hands and face before eating, drinking and smoking.

## 9. Physical and chemical properties

### General information

#### Appearance

**Physical state** : Solid [Solid powder]

**Color** : White.

**Odor** : Odourless.

#### Important health, safety and environmental information

**pH** : Not applicable.

**Melting point** : Sublimation Temperature: 1975°C (3587°F)

**Flash point** : Not applicable.

**Explosive properties** : Not explosive.

**Oxidizing properties** : Not oxidising.

**Relative Density** : 5.61 (Water = 1)

**Solubility** : Insoluble in cold water.

**Flammability of the product** : Non-flammable.

## 10. Stability and reactivity

**Stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Materials to avoid** : Reactive or incompatible with the following materials: acids and alkalis.  
Keep away from acids. Keep away from alkalis.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Potential acute health effects

**Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

**Ingestion** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

### Acute toxicity

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
zinc oxide	LD50 Oral	Rat	15000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation	Rat	>5700 mg/m <sup>3</sup>	4 hours
	Dusts and mists			

**Potential chronic health effects****Chronic toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Not available.					

**Sensitizer**

Product/ingredient name	Route of exposure	Species	Result
Not available			

**Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
Not available				

**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
Not available			

**Teratogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
Not available				

**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Not available						

Chronic effects : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

Ingestion : Adverse symptoms may include the following :  
Respiratory tract irritation  
coughing

Inhalation : No specific data

Skin : No specific data

Eyes : Adverse symptoms may include the following :  
Irritation  
Redness

**12. Ecological information****Ecotoxicity data****Aquatic ecotoxicity**

Product/ingredient name	Test	Result	Species	Exposure
zinc oxide	(growth rate)	Acute EC50 0,17 mg/l	Algae - Selenastrum Capricornutum	72 hours
	-	Acute LC50 1,1 to 2,5 ppm Fresh water	Fish – Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours

**Other ecological information****Persistence/degradability**

Product/ingredient name	Test	Result	Dose	Inoculum

Not available

**Product/ingredient name**

Not available

**Aquatic half-life****Photolysis****Biodegradability****Product/ingredient name**

Not available

**LogP<sub>ow</sub>****BCF****Potential****Environmental effects**

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

**Other adverse effects**

: No known significant effects or critical hazards

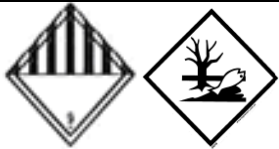

**13. Disposal considerations****Methods of disposal**

: The generation of waste should be avoided or minimized wherever possible.

Avoid dispersal or spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

This product is recyclable. Consideration of disposal via this route should be given.

**14. Transport information**

Regulatory information	UN number	Proper Shipping name	Class	Packing group	Label	Additional information
<b>Australian Transport Regulations</b>						
<b>ADG Classification</b> ( Road & Rail )	Not Regulated	-	-	-	-	Special provision AU01 – (page 623- ADG 7.4 Edition). Environmentally Hazardous substances meeting the descriptions of UN 3077 or UN3082 are not subject to this code when transported by road or Rail in; a) Packagings that do not incorporate a receptacle exceeding 500kg (L); or b) IBC's.
<b>International Transport Regulations</b>						
<b>IMO / IMDG Classification</b>	UN 3077	Environmentally hazardous substance, solid, N.O.S. (zinc oxide). Marine pollutant (zinc oxide)	9	III		<b>Emergency schedules (EmS)</b> F-A, S-F Marine pollutant
<b>IATA Class</b>	UN 3077	Environmentally hazardous substance, solid, N.O.S. (zinc oxide). Marine pollutant (zinc oxide)	9	III		<b>Passenger and Cargo Aircraft</b> Quantity limitation: 400 kg Packaging instructions: 911 <b>Cargo Aircraft Only</b> Quantity limitation: 400 kg Packaging instructions: 911 <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 30 kg Packaging instructions: Y911

## 15. Regulatory information

### Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated

### Control of Scheduled Carcinogenic Substances

#### Ingredient name

#### Schedule

No listed substance

### The components of this product are reported in the following inventories :

**Australia (AICS)** : All components are listed or in compliance with the inventory

**Canada (DSL)** : All components are listed or in compliance with the inventory

**China (IECSC)** : All components are listed or in compliance with the inventory

**European Union (REACH)** : All components are listed or in compliance with the inventory

**Japan (ENCS / ISHL)** : All components are listed or in compliance with the inventory

**Korea (KECI)** : All components are listed or in compliance with the inventory

**New Zealand (NZIoC)** : All components are listed or in compliance with the inventory

**PICCS (Phillipines)** : All components are listed or in compliance with the inventory

**USA (TSCA)** : All components are listed or in compliance with the inventory

**Product use** : Industrial applications.

**Classification and labeling** : Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.

## 16. Other information

### History

Date of issue : 15.12.2016 – Version 6

Date of previous issue : 27.01.2016 – Version 5

Version (current) : 6

### Notice to reader:

*To the best of our knowledge, the information contained in this Safety Data Sheet is accurate and reliable on presently available resources. However, neither the seller nor any of its subsidiaries assumes any responsibility or liability whatsoever for the accuracy or completeness of the information contained herein.*

*This Safety Data Sheet shall not constitute a guarantee for any specific product features. Final determination of suitability of this material is the sole responsibility of the user.*

*All materials may present unknown hazards and should be used and handled with caution and following reasonable safety procedures. Consequently the buyer assumes all risks in connection with the use and handling of this material.*