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Material Safety Data Sheet

Active Zinc Oxide

Section 1 - Product Identification

Synonyms : Zinc Oxide, Zinc White

Molecular Weight : 81.39 g/mol

Chemical Formula : ZnO

Company Identification : Tradeasia International Pte. Limited

Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore
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Recommended use of the chemical and restrictions on use:

Manufacturing of Substances, Laboratory chemicals.

Section 2 – Composition/Information on Ingredients

Product Name	EC Code/CAS No	Concentration
Active Zinc Oxide	215-222-5/1314-13-2	<= 100%

Section 3 – Hazards Identification

3.1 GHS Classification

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Precautionary Statements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word: Warning

Hazard statement(s)

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Disposal

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

3.3 Other hazards

None.

Section 4 – First-Aid Measures

4.1. Description of first aid mesaures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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 3.2) and/or in section 11

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

N.A.

Section 5 – Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Aluminium oxide, zinc oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other section

For disposal see section 13.

Section 7 – Handling and Storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 3.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

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

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

Zinc oxide, PEL (long term), 5 mg/m^3. Basis: Singapore, Workplace Safety and Health Act – First Schedule Permissible Exposure Limits of Toxic Substances.

Zinc oxide, PEL (short term), 10 mg/m^3. Basis: Singapore, Workplace Safety and Health Act – First Schedule Permissible Exposure Limits of Toxic Substances.

8.2. Appropriate engineering controls

General industrial hygiene practice. Wash hands before breaks and at the end of workday.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Respirator:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Clothing:

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Gloves:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance : Yellowish to White Powder

Odour : N.A.

Odour threshold : N.A.

pH @ 20°C : N.A.

Melting point : N.A.

Boiling point : N.A.

Flash point : N.A.

Evaporation rate : N.A.

Flammability : N.A.

Upper/lower flammability or explosive limits : No data available

Vapour pressure : N.A.

Vapour density : No data available

Relative density : N.A.

Solubility in water : N.A.

Partition coefficient, n-octanol/water: N.A.

Auto-ignition temperature: N.A.

Decomposition Temperature: N.A.

Surface tension: N.A.

Viscosity: N.A.

Section 10 – Stability and Reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid:

Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials, Halogenated hydrocarbon, Strong bases, Strong oxidizing agents, Strong acids, Vinyl compounds, Ethylene oxide, Chlorine trifluoride, Oxygen difluoride, Sodium nitrate.

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Aluminum Oxide, Zinc Oxides.

Other decomposition products - No data available

Section 11 – Toxicological Information

11.1 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: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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 (p-chlorobenzotrifluoride)

Additional Information

RTECS: No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated, prolonged or repeated exposure can cause: Damage to the lungs., Cough, chest pain, Difficulty in breathing, Gastrointestinal disturbance.

Section 12 – Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

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 Other adverse effects

Very toxic to aquatic life with long lasting effects.

Section 13 – Disposal Considerations

13.1. Disposal methods

Product:

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging:

Dispose of as unused product.

Section 14 – Transport Information

14.1. UN number : ADR/RID: 3077 IMDG: 3077 IATA-DGR: 3077

14.2. UN proper shipping name: ADR/RID, IMDG, IATA-DGR – Environmentally Hazardous Substance, Solid, Zinc Oxide

14.3. Transport of hazard classes : ADR/RID: 9 IMDG: 9 IATA-DGR: 9

14.4. Packing 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 : No data available

14.7. Incompatible materials:

Halogenated hydrocarbon, Strong bases, Strong oxidizing agents, Strong acids, Vinyl compounds, Ethylene oxide, Chlorine trifluoride, Oxygen difluoride, Sodium nitrate

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.

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations for the substance/mixture:

Notification Status

AICS: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL

ENCS: On the inventory, or in compliance with the inventory

ISHL: On the inventory, or in compliance with the inventory

KECI: On the inventory, or in compliance with the inventory

NZIoC: Not in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

Section 16 : Additional Information

16.1. Full text of H-Statements referred to under sections 3 and 4

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects

16.2. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.