

MATERIAL SAFETY DATA SHEET

In Accordance with regulation 2015/830

Page: 1 of 6

Product Name: **Nanosun Zinc Oxide E65/30**

Issue Date: September 2019

Version: 6

Company Supplier: Micronisers Pty Ltd., 6-8 England Street, Dandenong VIC 3175, Australia;
Telephone +613 9768 3277. Replaces SDS of November 2016

Classified as Hazardous

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: Nanosun Zinc Oxide E65/30
Article No.: n.av.
Preparation No.: n.a
Registration No.: n.av.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use: UV absorber

1.3 Details of the supplier of the safety data sheet

1.3.1 Address of the Company / Supplier:

Micronisers Pty Ltd., 6-8 England Street, Dandenong VIC 3175, Australia
Telephone: +613-9768-3277, Telefax: +613-9768-3986, E-Mail: info@micronisers.com

1.3.2 Responsible for the data sheet:

Micronisers Pty Ltd., 6-8 England Street, Dandenong VIC 3175, Australia
Telephone: +613-9768-3277, Telefax: +613-9768-3986, E-Mail: info@micronisers.com

1.4 Emergency telephone number

Emergency - Telephone of Company / Undertaking Poisons Information Centre Australia
Telephone: +61 413 590 151 (AEST 8:00 – 20:30) Telephone: 13 11 26
Overseas users: call Local Poisons information Centre

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

* Aquatic Acute 1 H400 / Aquatic Chronic 1 H410

*

2.2 Label elements

Classification according to 1272/2008/EC: Yes.

Applicable Exemptions: Yes.

Signal word(s): Warning

Component(s):

Hazard pictogram(s):



H - Phrases:

H 410: Very toxic to aquatic life with long lasting effects.

P - Phrases:

P 102: Keep out of reach of children.

P 262: Do not get in eyes, on skin, or on clothing.

P 301 + P 101: IF SWALLOWED: If medical advice is needed, have product container or label at hand.

P 501: Dispose of contents/container to special waste collection point.

P 273: Avoid release to the environment.

Additional Markings:

The above mentioned labelling is valid for distribution to industrial user/ private consumer.

2.3 Other hazards

Observe the usual precautionary measures for handling chemicals.

May cause temporary eye irritation.

* This mixture contains no substances which are assessed to be PBT or vPvB.

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SECTION 3: Composition/information on ingredients

3.1 **Substances**
n. ap.

3.2 **Mixtures**

Chemical Characterization: Zinc oxide dispersion in Capric Caprylic Triglyceride

Components listed in TSCA

Ingredients:

CAS - No.	EEC - No.	Material	m% - range	H - phrases
1314-13-2	215-222-5	Nano-Zinc oxide particle size < 100 nm REACH_01-2119463881-32-xxxx	65%	Aquatic Acute I; H400 Aquatic Chronic 1; H410

Text of H- phrases: see section 16

Non-dangerous Ingredients:

CAS - No.	Material
73.398-61-5	Capric Caprylic Triglyceride

SECTION 4: First aid measures

4.1 **Description of first aid measures**

4.1.1 **Inhalation:**

Product is not volatile.

4.1.2 **Skin Contact:**

Wash away with soap and water.

In the event of symptoms occurring, seek medical treatment.

4.1.3 **Eye Contact:**

Flush eyes out immediately with large amounts of water with eye lids lifted. In the event of symptoms occurring, seek medical treatment.

4.1.4 **Ingestion:**

Do not cause vomiting. Rinse mouth out and drink plenty of water afterwards. Consult physician.

4.2 **Most important symptoms and effects, both acute and delayed**

None known.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 **Extinguishing media**

5.1.1 **Suitable Extinguishing Media:**

Use extinguishing media suited to the primary source of the fire.

5.1.2 **Extinguishing Media to Avoid:**

None.

5.2 **Special hazards arising from the substance or mixture**

In the case of fire, the following product(s) may occur: carbon monoxide

5.3 **Advice for firefighters**

5.3.1 **Special Protective Equipment:**

Wear positive pressure self-contained breathing apparatus. Wear full protective clothing.

5.3.2 **Additional Information:**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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SECTION 6: Accidental release measures

- 6.1 **Personal precautions, protective equipment and emergency procedures**
See chapter 8.2.2
- 6.2 **Environmental precautions**
Do not allow to enter drainage / surface-water / ground-water.
Inform responsible authorities in the case of accidental release.
Prevent spread over a wide area (e.g. by containment or oil barriers).
- 6.3 **Methods and material for containment and cleaning up**
Take up with suitable absorbent material. Dispose of absorbed material in accordance with the regulations.
- 6.4 **Reference to other sections**
None.

SECTION 7: Handling and storage

- 7.1 **Precautions for Safe Handling**
 - 7.1.1 **Precautions for Safe Handling:**
Avoid unnecessary contact. Wash hands before breaks and after work. Do not wear contaminated clothing. Do not eat, drink or smoke during work.
 - 7.1.2 **Precautions in Case of Fire and Explosion:**
Normal measures for preventive fire protection.
- 7.2 **Conditions for safe storage, including any incompatibilities**
 - 7.2.1 **Storage Instructions:**
Keep container tightly closed in a dry and well-ventilated place. Avoid subsoil penetration. Store in original container.
 - 7.2.2 **Store away from:**
Store away from oxidizing agents.
 - 7.2.3 **Further Information on Storage Conditions:**
None.
- 7.3 **Specific end use(s)**
n.av.

SECTION 8: Exposure controls/personal protection

- 8.1 **Control parameters**

Material	Limit Value
Zinc oxide	n.av
- 8.2 **Exposure controls**
 - 8.2.1 **Appropriate engineering controls**
No special precautions are required
 - 8.2.2 **Individual protection measures**
 - 8.2.2a **Respiratory Protection:** No special precautions are required
 - 8.2.2b **Hand Protection:** In case of prolonged skin contact use protective gloves.
Protective gloves complying with EN 374 butyl-rubber break through time > 8h. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
 - 8.2.2c **Eye Protection:** Goggles
 - 8.2.2d **Skin Protection:** No.
 - 8.2.2e **Further Information:** Observe wearing time limits:
 - 8.2.3 **Environmental exposure controls:**
Do not contaminate water. Do not let product enter drains.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

9.1.1 **Form:** slurry **Colour:** white **Odour:** almost odourless

Odour threshold: n.av.

9.1.2 Boiling point / Boiling - range (°C): n.av., Melting point / Melting range (°C): n.av.

9.1.3 Flash point (°C): n.ap., closed cup

9.1.4 Flammability (EEC A10/A13): No.

9.1.5 Ignition temperature (°C): n.av.

9.1.6 Autoflammability (EEC A16): None.

9.1.7 Oxidising properties: No.

9.1.8 Explosion hazard: No.

9.1.9 Explosion limits (Vol.%) lower: n.av., upper: n.av.

9.1.10 Vapour pressure: / Vapour density (Air = 1): n.ap. / n.av.

9.1.13 Solubility (in Water): Insoluble

9.1.14 Partition coefficient, n-Octanol / Water: n.ap.

9.1.15 Viscosity: n.av.

9.1.16 Solvent content (m %): Not relevant

9.1.17 Thermal decomposition (°C): n.av.

9.1.18 Evaporation rate: n.av.

9.2 Other information

Nano-ZnO: Particle size < 100 nm
Redox activity: n.av.
Photocatalytic Activity: n.av.

SECTION 10: Stability and reactivity

10.1 Reactivity

None.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

No conditions to be specially mentioned.

10.5 Incompatible materials

Reactions with strong oxidising agents.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed. To avoid thermal decomposition, do not overheat.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Health Effects:

Inhalation: Nano-ZnO Alveolar dust fraction:
Prolonged or repeated exposure may cause injuries to liver, kidneys, lungs, nerves.

Ingestion: ZnO: High dose (1 - 5 g / kg):
May cause damage to organs.

Skin Contact: Dangerous amounts can't be absorbed through the skin.

Skin corrosion / irritation: Mildly irritating - not to be labelled.

Serious eye damage / irritation: Mildly irritation - not to be labelled.

Respiratory or Skin sensitization: n.av.

Germ cell Mutagenicity: Ames-Test: negative

Carcinogenicity: n.av.

Reproductive toxicity: n.av.

STOT - single exposure: n.av.

STOT - repeated exposure: n.av.

Aspiration hazard: n.av.

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11.1.1 Practical Experience

11.1.11 n.av.

11.1.12 Practical experience

Observations relevant for classification:

None.

Further Observations:

None.

Classification of the preparation has been done by calculation in accordance with EEC directives.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Zinc oxide: LC₅₀ (96 h) rainbow trout < 0,1 mg /L

Nano-ZnO: Toxicity to bacteria (*Vibrio fischeri*) : 0,18 mg / l

Toxicity to daphnia. 1,9 mg / l

but: solution of Zn²⁺ was identified as crucial.

12.2 Persistence and degradability (for zinc oxide)

inorganic product, cannot be eliminated from water by biological purification process

12.3 Bioaccumulative potential (for zinc oxide)

Assimilation of ZnO in *Daphnia magna*. Bioaccumulation is likely.

12.4 Mobility in soil (for zinc oxide)

Immobilization EC₅₀ / 4 h / daphnia = 0,622 mg / l

12.5 Results of PBT and vPvB assessment

* This mixture contains no substances which are assessed to be PBT or vPvB.

12.6 Other adverse effects

12.6.1 COD-Value, mg/g: n.av.

12.6.2 BOD₅-Value, mg/g: n.av.

12.6.3 AOX-Remarks: Not relevant

12.6.4 Significant Components: Zinc oxide

12.6.5 Other adverse effects: None.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Recommendation:

D 10 Waste - Code - No:

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.



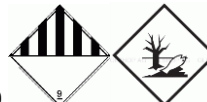
In addition comply with the regional authorities.

13.2 Contaminated Packaging

13.2.1 Recommendation: Wash with suitable cleaner. Otherwise as described under Residues.

13.2.2 Safe Handling: As described under Residues.

SECTION 14: Transport information

ADR	IMDG	IATA
14.1 UN number 3082	3082	3082
14.2 UN proper shipping name UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Contains: Zinc oxide)	Environmentally hazardous substance, liquid, n.o.s. (Contains: Zinc oxide) MARINE POLLUTANT	Environmentally hazardous substance, liquid, n.o.s. (Contains: Zinc oxide)
* 14.3 Transport hazard class(es) 		

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14.4	Packing group III	III	III
14.5	Environmental hazards	Yes.	
14.6	Special precautions for user Transport-category: 3 Classification Code: M6 Hazard - No.: 90 LQ: 5 L	F-A, S-F	Packing Instructions (Passenger) 964 Packing Instructions (Cargo) 964
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code n.av.		

SECTION 15: Regulatory information

- 15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No data available.
- 15.2 **Chemical safety assessment:**
A chemical safety assessment has not been carried out.

SECTION 16: Other information

Text of H phrases mentioned in Section 3

H 400: Very toxic to aquatic life.
H 410: Very toxic to aquatic life with long lasting effects.

This datasheet has been compiled in accordance with Regulation 2015/830
The statements in this Material Safety Data Sheet were made to the best of our knowledge and are as accurate as possible. They are given for information only. They do not constitute a contractual guarantee of a product's properties. They must neither be altered nor transferred to other products.

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