



Material Safety Data Sheet

According to EU Regulation 1907/2006 in the current version

Date 2/7/2016

Version 3.0

ZINC OXIDE

1. Identification of the substance/preparation and the company

Trade name: Zinc oxide
 Utilization: Cosmetic raw material
 Supplier company: **Elemental SRL**, Piata Cazarmii no.15, 410188-Oradea, jud.Bihor, Romania
 identification: Tel/Fax: +40259-436.755, www.elemental.eu
 Emergency: RO: numar national pentru cazuri de urgenta: 021 3183606 Institutul de Sanatate Publica Bucuresti. International emergency number: +49 180 2273-112

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

N Dangerous for the environment R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

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): P273 Avoid release to the environment. P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements: none

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. Composition / Information on ingredients

INCI name: zinc oxide

CAS-No. : 1314-13-2 EINECS-No. : 215-222-5 Registration nr: 01-2119463881-32-xxx

3.1 Substance Formula Ozn Molecular weight: 81,39 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008:

Component	Classification	Concentration
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Zinc oxide

CAS-No. 1314-13-2	EC-No. 215-222-5	Aquatic Acute 1; Aquatic Chronic 1; H410	<= 100 %
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Hazardous ingredients according to Directive 1999/45/EC:

Component	Classification	Concentration
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Zinc oxide

CAS-No. 1314-13-2	EC-No. 215-222-5	N, R50/53	<= 100 %
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For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. First Aid

4.1 Description of first aid measures

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.



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In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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 section 11

4.3 Indication of any immediate medical attention and special treatment needed: No data available

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: None

5.3 Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information: No data available

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. Evacuate personnel to safe areas. Avoid breathing dust.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections: For disposal see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. 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.

8. Exposure Controls and Personal Protection

8.1 Control parameters

Biological limit values: No biological exposure limits noted for the ingredient(s)

Recommended monitoring procedures: Follow standard monitoring procedures.

Components with workplace control parameters

Derived no-effect level (DNEL):

workers, systemic, long-term skin contact: 83 mg/kg KW/day

workers, systemic, long term inhalation: 5 mg/m³

consumers, systemic, long-term skin contact: 83 mg/kg KW/day

consumers, systemic, long term inhalation: 2,5 mg/m³



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consumers, systemic, long-term ingestion: 0,83 mg/kg KW/day

Predicted no effect concentrations (PNECs):

fresh water: 20,6 µg/l

marine water: 6,1 µg/l

residual water: 52 µg/l

sediment, sweet water: 117,8 mg/kg

sediment saline water: 56,5 mg/kg

ground, net, dry: 35,6 mg/kg

Alte valori limită de expunere (RO):

RO OEL, Valoare limita de expunere 8 ore, Fum: 5 mg/m³

RO OEL Valoare limita de expunere termen scurt (15 min) Fum: 10 mg/m³

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.



Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use.

Body Protection: impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.

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

9. Physical and Chemical Properties

Appearance:	solid powder
Colour:	white
Odour:	odorless
Melting point:	1.975 °C
Boiling point:	not applicable
Flash point:	not applicable
pH value:	aprox. 7 (50 g/l) in suspension
Density:	circa 5,5 - 5,7 g/cm ³ (20 °C)
Solubility:	insoluble in water, < 2 mg/l (20 °C)
Relative density:	aprox. 600 kg/m ³

10. Stability and Reactivity

10.1 Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport

10.2 Chemical stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: No data available

10.5 Incompatible materials: Acids and base. Contact with strong acids may cause vigorous reactions with the development of heat. Contact with base will form water and zincates.

10.6 Hazardous decomposition products

Other decomposition products - No data available



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11. Toxicological Information

11.1 Information on toxicological effects

Acute oral toxicity: LD50 Rat: > 5.000 mg/kg (IUCLID), LDLO human: 500 mg/kg (RTECS)

Acute inhalation toxicity: LC0 Rat: >= 5 mg/m³; 3 h (Lit.)

Acute dermal toxicity: not available. Skin irritation: possible slight irritation. Eye irritation: possible slight irritation.

Sensitisation: human experience, result: negative (IUCLID).

Germ cell mutagenicity: Ames test negative

Carcinogenicity: not listed by ACGIH, IARC, NTP, or CA Prop 65.

Reproductive toxicity: information on the developmental and reproductive toxicity in humans following inhalation exposure to ZnO was unavailable

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

11.2 Summary of evaluation of the CMR properties:

NIFSTOT-single exposure: NIFS TOT-repeated exposure: NIF Aspiration hazard: NIF Additional toxicological information: to the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12. Ecological Information

12.1 Toxicity

Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 1,31 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* (Water flea) - 0,12 mg/l - 48 h

12.2 Persistence and degradability: not applicable for inorganic substances

12.3 Bioaccumulative potential: no data available

12.4 Mobility in soil: no data available

12.5 Results of PBT and vPvB assessment: this substance contains no components considered to be either persistent, bioaccumulative and toxic

12.6 Other adverse effects: very toxic to aquatic life.

13. Disposal Considerations

The generation of waste should be avoided or minimised wherever possible. 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. Consult state, local or national regulations to ensure proper disposal. Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose product and waste in accordance with local authority regulations.

14. Transport Information

14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)

IATA: Environmentally hazardous substance, solid, n.o.s. (Zinc oxide)

14.3 Transport hazard class(es) ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards ADR/RID: yes IMDG Marine pollutant: yes IATA: yes



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15. Additional Regulatory Information

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

EU regulations

EU Regulations: (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. Other Information

Relevant R-phrases and/or H-statements (number and full text):

H400 -Very toxic to aquatic life. H410 -Very toxic to aquatic life with long lasting effects. H319 -Causes serious eye irritation. H335 -May cause respiratory irritation. H315 -Causes skin irritation. R50 -53 Aquatic Acute 1, Aquatic Chronic 1: very toxic to aquatic organisms, May cause long-term adverse effect In aquatic environment. S60 -This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

Disclaimer:

This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.