Zinc Oxide, Micronized and Coated

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / March 26, 2012 / Rules and Regulation

Revision Date: 27-Feb-2024
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1 PRODUCT & COMPANY IDENTIFICATION

Product Name: Zinc Oxide, Micronized and Coated
Synonyms: Zinc oxide, calamine
INCI Name: Zinc oxide, triethoxycaprylylsilane
CAS Number: 1314-13-2, 2943-75-1
Formula: Not available
Product Form: Solid
Product Use: Cosmetic use

Distributor: MakingCosmetics Inc.
Address: 10800 231st Way NE
Redmond, WA 98053 (USA)
Phone / Fax: 425-292-9502 / 425-292-9601
Web: **www.makingcosmetics.com**

Emergency Telephone Number: 1-800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

Classification: For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

Signal Word: **Warning**

Hazard Pictograms:

Hazard Statements:
According to Regulation (EC) No 1272/2008 [CLP]
(Aquatic Acute 1) H400: Very toxic to aquatic life.
(Aquatic Chronic 1) H410: Very toxic to aquatic life with long lasting effects.
M-factor acute: 1
M-factor chronic: 1

Precautionary Statements:
According to Regulation (EC) No 1272/2008 [CLP]
P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of contents and container to hazardous or special waste collection point.

Potential Health Hazards:
Eyes: Not expected to be an irritant
Inhalation: No data available.
Skin: Not expected to be an irritant
Ingestion: No data available.
Other: Fine dust can form an inflammable mixture together with air.

NFPA Ratings (704):

Health	N/A	N/A
Flammability	N/A	N/A
Reactivity	N/A	N/A
Specific Hazard	N/A	

3 COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %	Molecular Weight
Zinc oxide	1314-13-2	96% - 99%	Not Available
Triethoxycaprylylsilane	2943-75-1	1% - 4%	Not Available

Hazardous Ingredients (GHS): According to Regulation (EC) No. 1272/2008

Zinc Oxide:
Content (W/W): >= 70 %
CAS Number: 1314-13-2
EC-Number: 215-222-5
REACH registration number: 01-2119463881-32
Aquatic Acute 1
Aquatic Chronic 1
M-factor acute: 1
M-factor chronic: 1
H400, H410

Triethoxyoctylsilane:	INDEX-Number: 030-013-00-7 Content (W/W): >= 1 % - < 5 % CAS Number: 2943-75-1 EC-Number: 220-941-2	Skin Corr./Irrit. 2 Eye Dam./Irrit. 2 H319, H315

4 FIRST AID MEASURES

Eyes:	Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention if necessary.
Inhalation:	If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.
Skin:	Wash off with soap and plenty of water. Seek medical attention if necessary.
Ingestion:	Rinse mouth and then drink 200-300 ml of water. Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. Seek medical attention if necessary.
Indication of Immediate medical attention/special treatment needed:	Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.
General Information:	If adverse health effects develop seek medical attention.

5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:	Use appropriate media (water spray, carbon dioxide, foam, dry powder) for adjacent fire. No unsuitable extinguish media listed.
Special protective equipment & precautions for firefighters:	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
Flash Points:	N/A (the product is a solid)
Specific hazards arising from the chemical:	Endangering substances: Harmful vapors. Advice: Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment & emergency procedures:	Use personal protective clothing. Avoid dust formation. Prevent electrostatic charge, any sources of ignition should be kept well clear. Fire extinguishers should be kept handy. Avoid dust formation. See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions:	Avoid liquid release into drains, surface waters, ground water, or environment. Notify environmental authorities in case of leak.
Methods and material for containment and cleaning up:	For small amounts: Pick up with suitable appliance and dispose of. For large amounts: Contain with dust binding material and dispose of. Dispose of all waste and cleanup materials in accordance with regulations.

7 HANDLING & STORAGE

Precautions for safe handling:	Handle in accordance with good industrial hygiene and safety practice. See section 8 for recommendations on the use of personal protective equipment.
Protection against fire and explosion:	Prevent electrostatic charge. Sources of ignition should be kept well clear. Fire extinguishers should be kept handy. Avoid dust formation.
Conditions for safe storage, incl. any incompatibilities:	Suitable materials for containers include high density polyethylene (HDPE), low density polyethylene (LDPE), paper, fiberboard. Keep container tightly closed in a cool, well-ventilated place. Do not store above + 40 °C. Avoid dust formation. Product has a shelf life of 36 months. Store away from incompatible materials (see section 10 for incompatibilities).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Zinc Oxide	0.0206 mg/l (freshwater)	PNEC	Not available
	0.0061 mg/l (marine water)	PNEC	Not available

	0.052 mg/l (intermittent release)	PNEC	Not available
	117.8 mg/kg (sediment freshwater)	PNEC	Not available
	56.5 mg/kg (sediment freshwater)	PNEC	Not available
	35.6 mg/kg (soil)	PNEC	Not available

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Appropriate Engineering Controls: If dust formation caused by handling cannot be avoided Staubex equipment for plants may be necessary. Ensure adequate ventilation.

Environmental Exposure Controls: Do not discharge product into the environment without control.

Personal Protection:

Eyes: Safety glasses with side shields should be worn (frame goggles) (e.g. EN 166).

Inhalation: Breathing protection if breathable aerosols/dust are formed. Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3). Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

Body: Body protection must be chosen depending on activity and exposure (e.g. apron, protecting boots, chemical-protection suit, according to EN 14605 in case of splashes or EN ISO 13982 in case of dust). Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

General Safety & Hygiene Measures: Avoid contact with eyes. Avoid inhalation of dusts. Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking, or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

Risk Management Measures:
Treat air emissions to provide a typical removal efficiency of (%): < 99%
Air treatment measures considered suitable are, e.g.: fabric filter.
Treat wastewater (prior to discharge to STP) to provide the required removal efficiency of (%): 90 - 99.9%
Wastewater treatment measures considered suitable are, e.g.: Precipitation
Treat air emissions to provide a typical removal efficiency of (%): < 99%
Air treatment measures considered suitable are, e.g.: Filtration
Treat wastewater (prior to discharge to STP) to provide the required removal efficiency of (%): 90 - 99.9%
Wastewater treatment measures considered suitable are, e.g.: Sedimentation
Treat air emissions to provide a typical removal efficiency of (%): 50 - 99%
Air treatment measures considered suitable are, e.g.: Gas scrubber
Treat wastewater (prior to discharge to STP) to provide the required removal efficiency of (%): 90 - 99.9%
Wastewater treatment measures considered suitable are, e.g.: Nanofiltration (NR), Ultrafiltration (UF) or Reverse Osmosis (OR)

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder	**Vapor Pressure:**	N/A (solid with a melting temperature over 300 °C)
Odor:	Odorless	**Relative Vapor Density:**	The product is a non-volatile solid
Odor Threshold:	N/A (odor not perceivable)	**Evaporation Rate:**	The product is a non-volatile solid
Color:	White	**Flammability:**	Not flammable
Primary Particle Size:	< 200 nm	**Upper/lower Explosive Limit:**	For solids not relevant for

			classification and labellinG
pH:	approx. 7 (50 g/l, 20°C) (as suspension)	**Flash Point:**	N/A (the product is a solid)
Boiling Point:	N/A (solid with a melting temperature over 300°C)	**Molecular Weight:**	81 (for ZnO) g/mol
Melting Point:	approx.1,970 °C	**Water Solubility:**	Insoluble
Partition Coefficient: n-octanol/water:	N/A	**Self-Ignition:**	Not classified as self-igniting
Self-Heating Ability:	Not capable of spontaneous heating.	**Thermal Decomposition:**	No decomposition if stored/handled as prescribed/indicated
Viscosity, Kinematic:	N/A (the product is a solid)	**Explosion Hazard:**	No indication of explosive properties.
Oxidizing Properties:	Not classified as oxidizing	**Bulk Density:**	Approx. 500 - 700 kg/m3 Literature data. 500 kg/m3

10 STABILITY AND REACTIVITY

Reactivity:	No hazardous reactions if stored and handled as prescribed/indicated.
Chemical Stability:	The product is stable if stored and handled as prescribed/indicated.
Hazardous Polymerization:	No data available.
Conditions to Avoid:	Avoid dust formation. Avoid deposition of dust.
Incompatible Materials:	hydrogen peroxide solution, magnesium powder (pyrophoric).
Hazardous Decomposition Products:	No hazardous decomposition products if stored and handled as prescribed/indicated.
Possible Hazardous Reactions:	No hazardous reactions if stored and handled as prescribed/indicated.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:	Virtually nontoxic after a single ingestion.
Skin:	Not irritating to skin.
Eyes:	Not irritating to eyes.
Respiratory:	No data available.
Ingestion:	LD50: > 5,000 mg/kg (rat)
Carcinogenicity:	Based on the ingredients there is no suspicion of a carcinogenic effect in humans. The product has not been tested. The statement has been derived from the properties of the individual components.
Germ Cell Mutagenicity:	The chemical structure does not suggest a specific alert for such an effect.
Embryotoxicity:	No data available.
Specific Target Organ Toxicity:	STOT single: Based on available data, the classification criteria are not met. Assessment of repeated dose toxicity: Repeated exposure to large quantities may affect certain organs. Damages blood cells. Damages the lung.
Reproductive Toxicity:	The chemical structure does not suggest a specific alert for such an effect.
Developmental Toxicity:	No data was available concerning toxicity to development.
Skin Sensitization:	There is no evidence of a skin-sensitizing potential.
Aspiration Hazard:	No aspiration hazard expected.
Other Relevant Toxicity Information:	The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

12 ECOLOGICAL INFORMATION

Ecotoxicity:	Very toxic (acute effect) to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.
Aquatic Vertebrate:	LC50: > 0.1 - 1 mg/l
Aquatic Invertebrate:	No data available.
Terrestrial:	No data available.
Microorganisms/Effect on Activated Sludge:	EC0 > 1 - 10 mg/l
Persistence and Degradability:	(Assessment biodegradation and elimination (H2O)) The product is virtually insoluble in water

	and can thus be separated from water mechanically in suitable effluent treatment plants
Bioaccumulative Potential:	No data available.
Mobility in Soil:	(Assessment transport between environmental compartments) Volatility: not applicable
PBT and vPvB Assessment:	According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self-classification.
Other Adverse Effects:	The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.
Other Ecotoxicological Advice:	The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13 DISPOSAL CONSIDERATIONS

Waste Residues:	Must be disposed of or incinerated in accordance with local regulations.
Product Containers:	Uncontaminated packaging can be re-used. Packs that cannot be cleaned should be disposed of in the same manner as the contents. Dispose of contents/container in accordance with all applicable local regulations.

The information in section 13 is for the product as shipped. Use and/or alterations to the product may change the characteristics of the material and alter the waste classification and proper disposal methods

14 TRANSPORT INFORMATION

DOT (Dept. of Transportation, USA):	Not data available.
TDG (Transportation of Dangerous Goods, Canada):	Not data available.
IMDG (International Maritime Dangerous Goods):	UN number: UN3077 UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Contains Zinc Oxide) Transport hazard class(es): 9, EHSM Packing group: III Environmental hazards: yes Marine Pollutant: yes Special precautions for user: None known
IATA (International Air Transport Association):	UN number: UN3077 UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Contains Zinc Oxide) Transport hazard class(es): 9, EHSM Packing group: III Environmental hazards: yes Special precautions for user: None known
ICAO (International Civil Aviation Organization):	UN number: UN3077 UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Contains Zinc Oxide) Transport hazard class(es): 9, EHSM Packing group: III Environmental hazards: yes Special precautions for user: None known
ADR/RID (International Carriage of Dangerous Goods by Rail and Road):	UN number: UN3077 UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Contains Zinc Oxide) Transport hazard class(es): 9, EHSM Packing group: III Environmental hazards: yes Special precautions for user: None known
ADN (EU Agreement International Carriage of Dangerous Goods by Inland Waterways):	UN number: UN3077 UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Contains Zinc Oxide) Transport hazard class(es): 9, EHSM Packing group: III

Environmental hazards: yes
Special precautions for user: None known
Transport in inland waterway vessel: Not evaluated

15 REGULATORY INFORMATION

Safety/Health/Environmental Regulations/Legislation Specific for the Substance/Mixture:	Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU): List entry in regulation: E1
TSCA Inventory Status:	Listed.
DSL (Canada):	Listed
EU (EINECS):	Listed
Switzerland:	Listed
China IECSC:	Listed
Australia AICS:	Listed
Taiwan (TCSI)	Listed
Japan (ENCS/ISHL):	Listed
Philippines PICCS:	Listed
Korea ECL:	Cleared with restrictions.
New Zealand (NZIOC):	Listed

16 OTHER INFORMATION

Revision Date:	27-Feb-2024
Compliance:	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200
Disclaimer:	This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitableness & completeness of such information for his own particular use.