

Zinc Oxide, Micronized


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

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1 PRODUCT & COMPANY IDENTIFICATION

Product Name:	Zinc Oxide, Micronized	Distributor:	MakingCosmetics Inc.
Synonyms:	Zinc oxide, calamine	Address:	10800 231 st Way NE Redmond, WA 98053 (USA)
INCI Name:	Zinc Oxide	Phone / Fax:	425-292-9502 / 425-292-9601
CAS Number:	1314-13-2	Web:	www.makingcosmetics.com
Formula:	No data available		
Product Form:	Solid		
Product Use:	Cosmetic use	Emergency Telephone Number:	1-800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

GHS Classification:	Aquatic Acute 1: Hazardous to the aquatic environment Aquatic Chronic 1: Hazardous to the aquatic environment												
GHS Labeling:	Warning												
GHS Hazard Pictograms:													
GHS Hazard Statements:	H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long lasting effects.												
GHS Precautionary Statements:	Prevention: (P273) Avoid release to the environment. Response: (P391) Collect spillage. Disposal: (P501) Dispose of contents/container in accordance with local regulations.												
Potential Health Hazards:	Eyes: May cause temporary eye irritation Inhalation: No data available. Skin: Not expected to be an irritant to the skin. Ingestion: No data available.												
NFPA Ratings (704):	<table border="0"> <tr> <td style="background-color: #0070C0; color: white;">Health</td> <td>1</td> <td>Slight</td> </tr> <tr> <td style="background-color: #FF0000; color: white;">Flammability</td> <td>0</td> <td>Minimal</td> </tr> <tr> <td style="background-color: #FFFF00; color: black;">Reactivity</td> <td>0</td> <td>Minimal</td> </tr> <tr> <td>Specific Hazard</td> <td colspan="2">N/A</td> </tr> </table>	Health	1	Slight	Flammability	0	Minimal	Reactivity	0	Minimal	Specific Hazard	N/A	
Health	1	Slight											
Flammability	0	Minimal											
Reactivity	0	Minimal											
Specific Hazard	N/A												

3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>Weight %</u>	<u>Molecular Weight</u>
Zinc Oxide	1314-13-2	100%	Not Available

4 FIRST AID MEASURES

Eyes:	Flush with copious amounts of water for at least 15 minutes. If irritation develops, seek medical attention.
Inhalation:	Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required
Skin:	Remove contaminated clothing. Wash off with soap and plenty of water. Seek medical attention if irritation develops.
Ingestion:	Immediately rinse mouth and then drink 200 -300 ml water. Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. Seek medical attention if necessary.
Most Important acute/delayed symptoms/effects:	Symptoms: Overexposure may cause metal fume fever, metallic taste in mouth, tightness in the chest, fever, coughing, headache. Hazards: No hazard is expected under intended use and appropriate handling.

Immediate medical attention/special treatment: (Note to physician) Treatment: Symptomatic treatment (decontamination, vital functions)

5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use appropriate media (water spray, carbon dioxide, foam, dry powder) for adjacent fire. Do not use water jet.

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: Hazards during fire-fighting: No particular hazards known.

Impact Sensitivity: Based on the chemical structure there is no shock-sensitivity.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment & emergency procedures: Ensure adequate ventilation. Wear appropriate respiratory protection. See section 8 for recommendations on the use of personal protective equipment.

Environmental precautions: Avoid liquid release into drains/surface waters/ground water. 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. Non sparking tools should be used. Dispose of all waste and cleanup materials in accordance with regulations.

7 HANDLING & STORAGE

Precautions for safe handling: Avoid aerosol formation. Do not mill the product in a dry form. Avoid inhalation of dusts. Protection against fire and explosion: Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame. See section 8 for recommendations on the use of personal protective equipment.

Conditions for safe storage, incl. any incompatibilities: Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Paper/Fiber board. Keep container tightly closed in a cool, well-ventilated place. Storage temperature: 15-40 °C. Store away from incompatible materials (see section 10 for incompatibilities).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Component</u>	<u>Exposure Limits</u>	<u>Basis</u>	<u>Entity</u>
Zinc Oxide	15 mg/m ³ (Total dust)	PEL	OSHA Z-1
	5 mg/m ³ (Respirable fraction)	PEL	OSHA Z-1
	5 mg/m ³ (Fumes/smoke)	PEL	OSHA Z-1
	2 mg/m ³ (Respirable fraction)	TWA	ACGIH
	5 mg/m ³ (Respirable fraction)	TWA	OSHA Z-3
	15 mg/m ³ (Total dust)	TWA	OSHA Z-3
	10 mg/m ³ (Respirable fraction)	STEL	ACGIH
	15 mill. of particles per cubic ft. of air (Respirable fraction)	TWA	OSHA Z-3
	50 mill. of particles per cubic ft. of air (Total dust)	TWA	OSHA Z-3

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

Personal Protection:

Eyes: Safety glasses with side shields should be worn.

Inhalation: Provide local exhaust ventilation to control dust. Wear a NIOSH-certified (or equivalent) particulate respirator.

Body:	Wear chemical resistant protective gloves. Consult with glove manufacturer for testing data. Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.
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.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder	Vapor Pressure:	Not determined because of high melting point.
Odor:	Odorless	Vapor Density:	The product is a non-volatile solid
Odor Threshold:	Not applicable	Evaporation Rate:	The product is a non-volatile solid.
Color:	White	Flammability:	Not flammable
Molecular Mass:	81.39 g/mol	Upper/lower Explosive Limit:	For solids not relevant for Classification/labelling.
pH:	Approx. 7 (50 g/l, 20 °C) (as suspension)	Flash Point:	N/A, the product is a solid
Boiling Point:	(1,013.25 hPa) The substance decomposes, therefore not determined.	Specific Gravity:	No data available
Melting Point:	Approx. 1,970 °C	Water Solubility:	1.2 mg/l (20 °C) (practically insoluble)
Bulk Density:	Approx. 500-700 kg/m ³ (Literature data)	Auto-Ignition Temperature:	Not determined
Partition Coefficient: n-octanol/water:	Not determined because substance is inorganic.	Thermal Decomposition:	No decomposition if used as directed.
Primary Particle Size:	< 200 nm	Miscibility with water:	Immiscible
Particle Size:	D10 31-35 nm spheroidal D50 41-46 nm spheroidal D90 59-70 nm spheroidal Spheroidal. Contains agglomerates/aggregates of nanoparticles.	Self-Igniting Temperature:	Not self-igniting

10 STABILITY AND REACTIVITY

Reactivity:	No hazardous reactions if stored and handled as prescribed/indicated.
Chemical Stability:	The product is chemically stable.
Hazardous Polymerization:	No data available.
Conditions to Avoid:	Sources of ignition; heat, sparks, open flame.
Incompatible Materials:	Hydrogen peroxide, magnesium acids, strong bases, reducing agents.
Hazardous Decomposition Products:	No hazardous or thermal decomposition products known.
Possible Hazardous Reactions:	No hazardous reactions if stored and handled as prescribed/indicated.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:	Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.
Skin:	Species: Rabbit. Result: non-irritant (OECD Guideline 404)
Eyes:	Species: Rabbit. Result: non-irritant (OECD Guideline 405)
Respiratory:	LC50 (Rat): > 5.7 mg/l (BASF-Test) 4 hours (tested as dust aerosol)
Ingestion:	LD50 (Rat): > 5,000 mg/kg (OECD Guideline 401)
Carcinogenicity:	The chemical structure does not suggest a specific alert for such an effect
Teratogenicity:	In animal studies the substance did not cause malformations. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Germ Cell Mutagenicity:	The substance was not mutagenic in bacteria. The substance was mutagenic in a mammalian

Specific Target Organ Toxicity (STOT):	cell culture test system. The substance was genotoxic in mammalian cell culture. Based on the available information there is no specific target organ toxicity to be expected after a single exposure.
Reproductive Toxicity:	Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition. As shown in animal studies, the product may cause damage to the testes after repeated high exposures that cause other toxic effects.
Repeated Dose Toxicity:	The substance may cause damage to the kidney after repeated ingestion. Prolonged and repeated exposure may cause blood disorders. The substance may cause damage to the lung after repeated inhalation.
Skin Corrosion/Irritation:	Not irritating to the skin. May cause slight irritation to the eyes.
Skin Sensitization:	Skin sensitizing effects were not observed in animal studies.
Primary Routes of Exposure:	Solids/Liquids: Ingestion and inhalation, but may include eye or skin contact. Gases: inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

12 ECOLOGICAL INFORMATION

Ecotoxicity:	Very toxic to aquatic life with long lasting effects. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.
Aquatic Vertebrate:	LC50 (Oncorhynchus mykiss(static)): > 0.1 -1 mg/l (96 hours) (The product has not been tested. The statement has been derived from substances/products of a similar structure or composition)
Aquatic Invertebrate:	EC50 (Ceriodaphnia dubia): 0. -1 mg/l (48 hours) (The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.)
Aquatic Plants:	EC50 (Pseudokirchneriella subcapitata): 0.1 -1 mg/l, (72 hours) (OECD Guideline 201, static)
Terrestrial:	Toxic effects have been observed in studies with soil living organisms. Toxic effects have been observed in studies with terrestrial plants
Microorganisms:	EC50: 5.2 mg/l, (2 hours) (OECD Guideline 209) static activated sludge of a predominantly domestic sewage. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Chronic Toxicity to Fish:	Oncorhynchus mykiss: 0.039 mg/l, (30 days) No observed effect concentration. (OECD Guideline 215, Flow through.) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Chronic Toxicity to Aquatic Invertebrates:	Daphnia magna (other, semistatic): 0.031 mg/l (50 days) No observed effect concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration
Persistence and Degradability:	Inorganic product which cannot be eliminated from water by biological purification processes
Bioaccumulative Potential:	Significant accumulation in organisms is not to be expected. Bioaccumulation Potential: 38 (28 days), other (measured) Bioconcentration Factor: 28,960(28 days), other (measured)
Mobility in Soil:	No data available.
Stability in Water:	According to structural properties, hydrolysis is not expected/probable. Study scientifically not justified.
PBT and vPvB Assessment:	No data available.

13 DISPOSAL CONSIDERATIONS

Waste Residues:	Do not discharge into waterways or sewer systems without proper authorization. Dispose of in accordance with national, state, and local regulations
Product Containers:	Dispose of container and any rinsate in an environmentally safe manner. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Dispose of in accordance with 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

<p>DOT (Dept. of Transportation, USA): IMDG (International Maritime Dangerous Goods):</p>	<p>Not regulated as dangerous goods. Hazard Class: 9 Packing group: III ID number: UN3077 Hazard label: 9 EHS Marine pollutant: YES Proper shipping name: Environmentally Hazardous Substance Solid N.O.S. (contains Zinc Oxide)</p>
<p>IATA (International Air Transport Association):</p>	<p>Hazard Class: 9 Packing group: III ID number: UN3077 Hazard label: 9 EHS Proper shipping name: Environmentally Hazardous Substance Solid N.O.S. (contains Zinc Oxide)</p>
<p>ICAO (International Civil Aviation Organization):</p>	<p>Hazard Class: 9 Packing group: III ID number: UN3077 Hazard label: 9 EHS Proper shipping name: Environmentally Hazardous Substance Solid N.O.S. (contains Zinc Oxide)</p>

15 REGULATORY INFORMATION

TSCA Registration Status:	Listed
CERCLA Hazardous Substance List:	Not regulated.
Hazard Categories EPCRA 311/312:	Aquatic Acute 1: Hazardous to the aquatic environment. Aquatic Chronic 1: Hazardous to the aquatic environment.
EPCRA 313:	Zinc Oxide (1314-13-2): 50LBS
Australia (AICS):	Listed
Canada (DSL):	Listed
China (IECSC):	Listed
Japan (ENCS/ISHL):	Listed
Korea (ECL):	Cleared with restrictions
New Zealand (NZIOC):	Listed
Philippines (PICCS):	Listed
Switzerland:	Listed
Taiwan (TCSI):	Listed

16 OTHER INFORMATION

Revision Date:	22-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 suitability & completeness of such information for his own particular use.