

SAFETY DATA SHEET

Safety Data Sheet Z-COTE ZINC OXIDE

Revision date : 2010/07/29
Version: 1.0

Page: 1/7
(30083071/SDS COS US/EN)

1. Product and Company Identification

Use: cosmetic ingredient

Company

TKB Trading, LLC
1101 9th Avenue
Oakland, CA, 94606, USA
P: 510-922-9027
www.tkbtrading.com

Chemical family: agglomerates / aggregates of nanoparticles
INCI Name: Zinc Oxide

2. Hazards Identification

Emergency overview

CAUTION:
PROLONGED OR REPEATED EXPOSURE MAY CAUSE LUNG DAMAGE.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
The product is under certain conditions capable of dust explosion.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of dusts.
Use with local exhaust ventilation.
Wear a NIOSH-certified (or equivalent) particulate respirator.
Wear safety glasses with side-shields.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.

State of matter: solid
Colour: white
Odour: odourless

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Irritation / corrosion:
Not irritating to the skin. Not irritating to the eyes.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

Safety Data Sheet

Z-COTE ZINC OXIDE

Revision date : 2010/07/29
Version: 1.0

Page: 2/7
(30083071/SDS COS US/EN)

Chronic toxicity:

Repeated dose toxicity: The substance may cause damage to the lung after repeated inhalation of high doses.

Genotoxicity: The substance was not mutagenic in bacteria. The substance was mutagenic in various cell culture test systems; however, these results could not be confirmed in tests with mammals.

Signs and symptoms of overexposure:

Overexposure may cause: metal fume fever, metallic taste in mouth, tightness in the chest, fever, coughing, headache

Potential environmental effects

Aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.

Bioaccumulation / bioconcentration:

The product has not been tested. The statement has been derived from the properties of the individual components.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
1314-13-2	100.0 %	Zinc oxide

4. First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Flush with copious amounts of water for at least 15 minutes. If irritation develops, seek medical attention.

If swallowed:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Flash point:

The substance/product is non-combustible.
not applicable

Flammability:

does not ignite

Self-ignition temperature:

not self-igniting
(other) not self-igniting

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

Safety Data Sheet

Z-COTE ZINC OXIDE

Revision date : 2010/07/29
Version: 1.0

Page: 3/7
(30083071/SDS COS US/EN)

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions:

Ensure adequate ventilation. Wear appropriate respiratory protection.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Cleanup:

Dispose of absorbed material in accordance with regulations.

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

7. Handling and Storage

Handling

General advice:

Avoid dust formation. Avoid aerosol formation. Don't mill the product in a dry form.

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.

Storage

General advice:

Keep container tightly closed in a cool, well-ventilated place.

8. Exposure Controls and Personal Protection

Advice on system design:

Provide local exhaust ventilation to control dust.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:

Wear chemical resistant protective gloves., Consult with glove manufacturer for testing data.

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Avoid contact with eyes. Avoid inhalation of dusts. Handle in accordance with good industrial hygiene and safety practice.

Safety Data Sheet

Z-COTE ZINC OXIDE

Revisiondate : 2010/07/29
Version: 1.0

Page: 4/7
(30083071/SDS COS US/EN)

9. Physical and Chemical Properties

Form:	powder, solid	
Odour:	odourless	
Colour:	white	
pH value:	approx. 7	(50 g/l, 20 °C) (as suspension)
Melting point:	approx. 1,970 °C	
Vapour pressure:		(20 °C) negligible
Bulk density:	approx. 500 - 700 kg/m ³	Literature data.
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Particle size:		Contains agglomerates / aggregates of nanoparticles
Solubility in water:	1.5 g/l	
Molar mass:	81.39 g/mol	
Other Information:	primary particle size < 200 nm	

10. Stability and Reactivity

Substances to avoid:
hydrogen peroxide, magnesium

Hazardous reactions:
No hazardous reactions if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if used as directed.

11. Toxicological information

Acute toxicity

Oral:
Type of value: LD50
Species: rat
Value: > 5,000 mg/kg
Literature data.

Inhalation:
Type of value: LC50
Species: rat (male/female)
Value: > 5.7 mg/l (BASF-Test)
Exposure time: 4 h

Irritation / corrosion

Skin:
Species: rabbit
Result: non-irritant
Literature data.

Eye:
Species: rabbit
Result: non-irritant

Safety Data Sheet

Z-COTE ZINC OXIDE

Revision date : 2010/07/29
Version: 1.0

Page: 5/7
(30083071/SDS COS US/EN)

Sensitization:
Guinea pig maximization test
Species: guinea pig
Result: Non-sensitizing.
Method: OECD Guideline 406

12. Ecological Information

Fish

Acute:
static
Oncorhynchus mykiss/LC50 (96 h): 0.14 mg/l
Literature data.

Chronic:
Flow through.
Jordanella floridae /NOEC (98 d): 0.051 mg/l

Aquatic invertebrates

Acute:
static
Daphnia magna/EC50 (48 h): 2.2 mg/l

Chronic:
Flow through. See user defined text. 28 d 0.025 mg/l
Aquatic plants

Toxicity to aquatic plants:
static
green algae/EC50 (72 h): 0.17 mg/l

Microorganisms

Toxicity to microorganisms:
bacterium/EC0 (16 h): > 80,000 mg/l

Degradability / Persistence Biological / Abiological Degradation

Evaluation: Inorganic product which cannot be eliminated from water by biological purification processes.

Bioaccumulation

mayfly Bioconcentration factor 1,130
flagfish Bioconcentration factor 432
marine algae Bioconcentration factor 4,680
marine algae Bioconcentration factor 16,600
oyster Bioconcentration factor 16,700

13. Disposal considerations

Waste disposal of substance:
Do not discharge into waterways or sewer systems without proper authorization. Dispose of in accordance with national, state and local regulations.

Container disposal:
Dispose of container and any rinsate in an environmentally safe manner. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

Safety Data Sheet

Z-COTE ZINC OXIDE

Revision date : 2010/07/29
Version: 1.0

Page: 6/7
(30083071/SDS COS US/EN)

14. Transport Information

Land transport USDOT

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Hazard class: 9
Packing group: III
ID number: UN 3077
Hazard label: 9, EHS
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains ZINC OXIDE)

Air transport IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3077
Hazard label: 9, EHS
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains ZINC OXIDE)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

Cosmetic TSCA, US released / exempt

OSHA hazard category: OSHA PEL established; Toxic - inhalation

EPCRA 311/312 (Hazard categories): Acute;

EPCRA 313:

<u>CAS Number</u>	<u>Chemical name</u>
1314-13-2	Zinc oxide

50 LBS

State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
MA, NJ, PA	1314-13-2	Zinc oxide

Safety Data Sheet

Z-COTE ZINC OXIDE

Revision date : 2010/07/29

Version: 1.0

Page: 7/7

(30083071/SDS COS US/EN)

16. Other Information

NFPA Hazard codes:

Health : 1 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 1[□] Flammability: 1 Physical hazard: 0

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

MSDS Prepared by:

Product Regulations

MSDS Prepared on: 2010/07/29

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY BASF HEREUNDER ARE GIVEN GRATIS AND BASF ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

END OF DATA SHEET