

Material Safety Data Sheet

1. Chemical Product and Company Identification

A. Product Name: ZINIKA_30AS

B. Product Recommended Use & Usage Limits

Used as cosmetics sunscreen and makeup powder

C. Company Identification/ Supplier/Distributor Information

Supply Company Name: Taekyung SBC Co., Ltd.

Address in Korea : 258,Sandandongseo-ro, Gunsan-si, Jeollabuk-do

Information providing service or urgent contact: 82-63-463-3041

2. Hazards Identification

A.GHS Classification

Hazard class and category code(s) :

Aquatic Acute 1

Aquatic Chronic 1

Hazard statement Code(s) :

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

B.Warning label items, including precautionary statements

Pictogram



Signal word

Warning

Hazard statements

H400 - Very toxic to aquatic life

H410 May cause long-term hazardous effects in the aquatic organisms Precautionary Statement

Precautionary statement

Prevention

P273 : Avoid release to the environment.

Response

P391 : Collect spillage.

Storage

N/A

Disposal

P501 – Dispose of contents/container to ...Response

3. Composition

Chemical Name	CAS Number	Contents (%)
Zinc oxide	1314-13-2	95 - 99
Triethoxycaprylylsilane	2943-75-1	1 - 5

Note : The figures shown above are not the specifications of the product.

This grade is a nano-object having a length scale of approximately one to one hundred nanometers in any dimension, or a nanostructured material which is consist of nano-object.

4. First aid measures

IF IN EYES :

Consult medical personnel urgently.

Immediately wash eyes and skin with running water for at least 20 minutes.

IF INHALATION

Immediately remove victim to fresh air.

If victim has stopped breathing, give artificial respiration and seek medical assistance.

IF ON SKIN

Consult medical personnel urgently.

Remove contaminated clothing and shoes and isolate contaminated areas.

Immediately wash eyes and skin with running water for at least 20 minutes.

IF SWALLOWED

Don't feed anything for an unconscious person.

Call a POISON CENTER or doctor/physician if you feel unwell.

Make sure that medical personnel are aware of the substance and take protective measures.

5. Fire-fighting Measures

A. Suitable extinguishing media

For fire extinguishing involving this substance, use alcohol foam, carbon dioxide, or water spaying.

For extinguishment by smothering, use dry sand or soil

B. SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Heating may cause explosion of the container

The substance itself is nonflammable, but heating it causes decomposition and may create corrosive/toxic fume.

Irritable, corrosive, and toxic gas can be created from the fire.

Inhalation, ingestion, and skin absorption may fatal.

C. PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Away from the area and extinguish the fire from safe distance.

Dig a ditch to dispose and collect extinguishing water not to be dispersed

If not dangerous, move the container from fire area.

For tank fire, extinguish the fire from a distance as far as possible or use unmanned extinguishment equipments

After extinguish the fire on tank, cool down container with plenty of water for considerable time.

For tank fire, stand back immediately when there is high-pitched tone from pressure release equipment or the tank is discolored.

For tank fire, stand back from the tank wrapped in flames.

6. Accidental Release Measures

A. Personnel precautions, protective equipment and emergency procedures

Wipe the spilled materials immediately, and follow precautions in the clause of protective equipment.

If not dangerous, stop the leakage.

Wear appropriate protective clothes, and don't touch damaged container or leaking substances

Make sure no water gets into the container

Cover with plastic sheet to prevent diffusion

Give attention to conditions and materials to avoid.

B. Environmental precautions

Spilled material may cause corrosive/toxic contamination

Avoid inflow to water way, drain, basement, and sealed areas

Avoid release to the environment.

C. Methods and materials for containment and cleaning up

Absorb the spilled materials with inactive materials (for examples, dry sand or soil), and collect them in chemical waste container.

Absorb the liquid and wash out the contaminated are with detergent and water.

7. Handling & Storage

A. Precautions for safe handling

There could be residuals of product in empty container, so comply all MSDS/label precautions.

Give attention to conditions and materials to avoid

Work by referring to engineering controls and personal protection.

B. Recommendation for storage

Pay attention to materials and conditions to avoid.

8. Exposure control & Personal protection

A. OCCUPATIONAL EXPOSURE LIMITS

Domestic regulations

Zinc oxide Zinc oxide(fume)TWA - 5mg/m³ Zinc oxide(fume)STEL - 10mg/m³

Zinc oxide (dust)TWA - 2mg/m³

Triethoxycaprylylsilane No data

ACGIH regulations:

Zinc oxide TWA 2 mg/m³
 STEL 10 mg/m³

Triethoxycaprylylsilane No data

Biological exposure standards: No data available.

B. ENGINEERING MEASURES

No data

C. INDIVIDUAL PROTECTION MEASURES

Respiratory Protection :

ZINC OXIDE dust (respiratory dust)

Wear respiratory protective gears suitable for the physical and chemical characteristics of

exposed substance and certified by Korea Occupational Safety and Health Agency
ZINC OXIDE(fume)

Wear respiratory protective gears suitable for the physical and chemical characteristics of
exposed substance and certified by Korea Occupational Safety and Health Agency

Eye Protection : No data

Hand Protection : Wear general gloves.

Skin Protection : No special protection required. Wear standard protective clothing

9. Physical & Chemical Properties

A. Physical properties

Appearance : White fine powder

Color : white

B. Odor : None

C. pH : 6.95 ~ 7.37

D. Melting point/Freezing point : 1975°C / no data

E. Specific gravity/Density : 5.6 g/cm³

F. Solubility in water : No data

10. Stability & Reactivity

A. Chemical Stability

Stable under recommended storage conditions.

B. Conditions to avoid

High temperature.

C. Materials to avoid

N/A

D. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.- Zinc/zinc oxides

11. Toxicological Information

A. INFORMATION ON THE LIKELY ROUTES OF EXPOSURE

No information

B. DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Acute Toxicity

Oral

Zinc oxide LD50 > 5000 mg/kg (OECD Guideline 401 (Acute Oral Toxicity))

Triethoxycaprylylsilane LD50 > 5110 mg/kg (OECD Guideline 401 (Acute Oral Toxicity))

Skin

Zinc oxide LD50 > 2000mg/kg (OECD Guideline 402 (Acute Dermal Toxicity))

Triethoxycaprylylsilane No adverse effect observed (OECD Guideline 402 (Acute Dermal

Toxicity))

Inhalation

Zinc oxide LC50 > 5700mg/m³ Rat (OECD Guideline 403 (Acute Inhalation Toxicity))

Triethoxycaprylylsilane No adverse effect observed (OECD Guideline 403 (Acute Inhalation

Toxicity))

Skin Corrosion/Irritation

Zinc oxide Slightly irritation or non-irritation. Rabbit (ECHA publication 1991)

Triethoxycaprylylsilane No irritation. (OECD Guideline 404 (Acute Eye Irritation / Corrosion))

Serious Eye Damage/Irritation

Zinc oxide No irritation. (OECD Guideline 405 (Acute Eye Irritation / Corrosion))

Triethoxycaprylylsilane No irritation. (OECD Guideline 405 (Acute Eye Irritation / Corrosion))

Respiratory

No Information

Skin Sensitization

Zinc oxide Not sensitising (OECD Guideline 406 (Skin Sensitisation))

Triethoxycaprylylsilane Not sensitising (OECD Guideline 406 (Skin Sensitisation))

Carcinogenicity

IARC

Zinc oxide No Information

Triethoxycaprylylsilane No Information

NTP

Zinc oxide No Information

Triethoxycaprylylsilane No Information

OSHA No Information

WISHA No Information

ACGIH No Information

Germ Cell Mutagenicity No Information

Reproductive Toxicity No Information

Specific Target Organ Toxicity - Single Exposure : No Information

Specific Target Organ Toxicity - Repeated Exposure : No Information

Aspiration Hazard No Information

12. Ecological Information

A. Toxicity

Fish

Zinc oxide LC50 3.31 mg/l 96 hr(ECHA, KOSHA)

Triethoxycaprylylsilane LC50 1.607 mg/l 96 hr(ECOSAR,KOSHA)

Crustacean

Zinc oxide LC50 0.5 mg/l 48 hr Ceriodaphnia dubia(ECHA, KOSHA)

Triethoxycaprylylsilane LC50 2.010 mg/l 48 hr(ECOSAR, KOSHA)

Birds

Zinc oxide No information

Triethoxycaprylylsilane EC50 < 1.000 mg/l 96 hr(ECOSAR, KOSHA)

B. PERSISTENCE AND DEGRADABILITY

Persistence

Zinc oxide No Information

Triethoxycaprylylsilane log Kow 1.1 @ 30°C) (estimation) (ECHA, KOSHA)

Degradability No data available

C. BIOACCUMULATIVE POTENTIAL

Biodegradation: Zinc oxide BCF 217(NITE, KOSHA)

Triethoxycaprylylsilane BCF 36.67(QSAR, KOSHA)

D. Movement in soil: No data available

E. Other hazardous effects: No data available

13. Disposal Consideration

A. DISPOSAL METHODS

Dispose of contents/container in accordance with local/national regulation

B. PRECAUTIONS

Dispose of contents/container in accordance with local/national regulation

14. Transport information

- A. UN NUMBER UN3077
- B. PROPER SHIPPING NAME Environmentally hazardous substance, solid, n.o.s. (Zinc oxide)
- C. TRANSPORTATION HAZARD CLASS(ES) 9
- D. PACKING GROUP, IF APPLICABLE 3
- E. Fire Emergency F-A
Outflow Emergency S-F

15. Regulatory information

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

Korea Not regulated

US Federal

OSHA Not regulated

CERCLA Not regulated

EPCRA 302 Not regulated

EPCRA 304 Not regulated

EPCRA 313 Not regulated

Rotterdam Convention(PIC) Not regulated

Stockholm Convention (POPs) Not regulated

Montreal Protocol Not regulated

EU classification

Zinc oxide N; R50-53

EU Risk phrase(s)

Zinc oxide R50/53

EU Safety phrase(s)

Zinc oxide S60, S61

16. Other Information/References

A. Reference Book

Globally Harmonized System of classification and labelling of chemicals, (3rd ed., 2009), UN
SDS & Labelling guide book (rev. 1st ed., Mar 2007), JPMA

Recommendations on the TRANSPORT OF DANGEROUS GOODS 16th edit. UN

Classification, labelling and packaging of substances and mixtures (reg.(EC) No 1272/2008)

2008 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2009 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/monoeval/grlist.html>

JIS Z 7250 2005

Supplier's SDS

NITE; http://www.safe.nite.go.jp/japan/sougou/view/SystemTop_jp.faces

JCDB ezCRIC

B. Other information

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The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.