Safety Data Sheet

1. PRODUCT AND COMPANY INFORMATION

Product name : Zinc dust pigments for paints

Company : TAEKYUNG SBC Co.,Ltd.

Address : 467,Gonghang-Daero, Gangseo-gu Seoul Korea 07570

Telephone : +82 2 3661 8011

Fax : +82 2 2088 0885

E-mail : jklee@taekyungsbc.co.kr

Website : www.taekyungsbc.co.kr

Recommended use of the chemical and restrictions on use

Recommended use : Raw material for paint, substitution agent

Restrictions on use : Foodstuffs

2. HAZARDS IDENTIFICATION

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Physical hazard : Not applicable

Health hazards : Skin / Eye Irritation - Category 2

Specific Target Organ Toxicity (single / repeated exposure) - Category 2

- Target Organ : respiratory system

Environment hazard : Aquatic Environment - Acute / Chronic 1

Label elements including precautionary statements

Symbols

Signal word : Warning

Hazard statements H315 Causes skin irritation

H319 Causes serious eye irritation

H371 May cause damage to organs

H373 May cause damage to organs through prolonged or repeated exposure

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Responses P302+P352 IF ON SKIN: wash with plenty of soap and water.

P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash before reuse.

P305+P351+P338 If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists : Get medical advice/attention.

P308+P311 IF exposed: call a POISON CENTER or doctor/physician.

P314 Get medical advice/attention if you feel unwell.

P391 Collect spillage. Hazardous to the aquatic environment

Storage P405 Store locked up.

Disposal P501 Dispose of contents/ container to an approved waste disposal plant.

NFPA Rating

Health : 2 Flammability : 1 Reactivity : 0 Water reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No.	EINECS No.	Conc. %
Zinc	7440-66-6	231-175-3	> 96 %
Zinc oxide : Coated	1314-13-2	215-222-5	< 4 %

4. FIRST AID MEASURES

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case of skin contact

Wash off with soap and plenty of water.

If inhaled

If breathed in, move person into fresh air.

If not breathing, give artificial respiration.

Consult a physician.

If swallowed

Never give anything by mouth to an unconscious person.

Rinse mouth with water.

Potential health effect

May be harmful if swallowed.

Other medical attention.

Medical personnel should be aware of the protective measures of the substance.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : No flash occurred under 93 ℃ (Rapid equilibrium method)

Autoignition temperature : No spontaneous combustion under 200 ℃

Burning rate : > 20 min at 20 ℃ (UN TDG test & criteria - Test N1)

Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical, carbon dioxide

Specific hazards arising from the chemical

No data available

Special protective equipment for fire-fighters

Use water spray to cool unopened containers.

Fire fighters should enter area wearing respiratory protection and protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Ensure adequate ventilation.

Avoid contact with skin and eyes.

Wear protective gloves/protective clothing/eye protection/face protection.

Environmental precautions

Collect spillage.

Don't dispose the product into drainages.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear protective gloves/protective clothing/eye protection/face protection.

Provide forced air ventilation in tanks and confined spaces.

Remove all sources of ignition.

Avoid breathing dust.

Avoid contact with skin and eyes.

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling.

Conditions for safe storage

Keep container tightly closed.

Store in a well-ventilated place.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Components with workplace control parameter

KOSHA :

Chemical Name	TWA	STEL
Zinc oxide	2 ㎎/㎥, respirable fraction	-

US ACGIH :

Chemical Name	TLV	STEL
Zinc oxide	2 ㎎/㎥, respirable fraction	10 ㎎/㎥

Appropriate engineering controls : Ventilation

Personal protective equipment

Respiratory protection : Dust mask

Hand protection : Chemical resistant gloves

Eye protection : Protective goggles

Skin and body protection : Working clothes

9. PHYSICAL AND CHEMICAL PROPERTIES

State : Solid (Powder) at 20 ℃

pH : 7.5 ~ 8.5 at 20 ℃ ※ Sample : H_2O = 1 : 5 (*V/V*)

Flash point : No flash occurred under 93 ℃ (Rapid equilibrium method)

Autoignition temperature : No spontaneous combustion under 200 ℃

Water solubility : Water Insoluble at 20 ℃

Density : > 7.0 at 20 ℃

Flammability

Burning rate : > 20 min at 20 ℃ ※ UN TDG test & criteria - Test N1

Explosive properties : No self-reaction hazard ※ UN TDG test & criteria - Test E3

Melting range : > 410 ℃ ※ from US NLM / HSDB

Boiling point (Initial) : No data available

Vapour pressure : No data available

Decomposition temperature : No data available

Evaporation rate : No data available

Partition coefficient (*n-octanol/water*) : No data available

Viscosity : No data available

Lower explosion limit / Upper explosion limit : No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Direct sunlight, heat, flames and sparks.

Avoid breathing dust.

Materials to avoid

Strong oxidizing agent, Acids

Hazardous decomposition products

No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral	rat	LD50 : > 2,000 mg/kg	※ from US NLM / ECHA
Skin	rabbit	LD50 : No data available	
Inhalation	rat	LC50 : No data available	

Skin irritation

Irritating (Zinc) ※ from US NLM / HSDB

Eye irritation

Irritating (Zinc) ※ from US NLM / HSDB

Respiratory sensitization : No data available

Skin sensitization : No data available

Germ cell mutagenicity : No data available

Carcinogenicity : Not classifiable ※ from CCRIS / IARC

Reproductive toxicity : No data available

Specific target organ toxicity - single exposure (GHS)

Causes damage to organs (Zinc oxide) ※ from US NLM / ECHA

Specific target organ toxicity - repeated exposure (GHS) ※ from US NLM / ECHA

Causes damage to organs through prolonged or repeated exposure. (Zinc oxide)

- Target organ : respiratory system

Aspiration hazard : No data available

12. ECOLOGICAL INFORMATION

Toxicity

Fish	LC50 :	< 1 mg/L, 96 h	※ from US NLM / ECHA
Crustacean	EC50 :	< 1 mg/L, 48 h	
Algae	EC50 :	< 1 mg/L - 96 h	

Persistence and degradability : No data available

Bioaccumulative potential : No data available

Mobility in soil : No data available

Other adverse effects : Toxic to aquatic life (Zinc ion)

13. DISPOSAL CONSIDERATIONS

Disposal consideration

Observe all environmental regulations.

Disposal precaution

Avoid disposing to the environment.

14. TRANSPORT INFORMATION

UN TDG

UN No. : 3077 Class : 9 Packing Group : Ⅲ

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS ZINC AND ZINC OXIDE)

IATA

UN No. : 3077 Class : 9 Packing Group : Ⅲ

Proper Shipping Name : Environmentally hazardous substance, solid, n.o.s. (contains zinc and zinc oxide)

IMDG

UN No. : 3077 Class : 9 Packing Group : Ⅲ

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS ZINC AND ZINC OXIDE)

Marine pollution : Yes

Special precaution

Fire EmS Guide : F-A

Spillage EmS Guide : S-F

15. REGULATORY INFORMATION

Korea Industrial Safety and Health Act (GHS) :

Skin / Eye Irritation - Category 2

Specific Target Organ Toxicity (single / repeated exposure) - Category 2

- Target Organ : respiratory system

Aquatic Environment - Acute / Chronic 1

Korea Hazardous Materials Safety Control Act : Not hazardous material

Korea Chemicals Control Act : Not toxic chemical

Korea Persistent Organic Pollutants Control Act : Not applicable

US OSHA Hazards (GHS) : Skin / Eye Irritation, Specific Target Organ Toxicity
Acute / Chronic Aquatic Environment

16. OTHER INFORMATION

Issued Date : 2017. 06. 09.

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Revision Date : 2020.03.24

References

- GHS Classification :
  Korea MSDS Testing Lab Certificate (Report No. 2017-03-002746), US NLM
- Physical and chemical properties : Korea MSDS Testing Lab Certificate
  Korea Institute of Fire Industry & Technology's hazmat Certificate (Report No. 2017-0374)
- Transport information : Korea MSDS Testing Lab Certificate
- Toxic & ecological information : OECD SIDS, ECHA, US NLM, HSDB, IARC, CCRIS, JP NITE

Acronyms and Websites

- ECHA : European chemical agency, http://echa.europa.eu/
- US NLM : U.S. National Library of Medicine, http://chem.sis.nlm.nih.gov/chemidplus/
- HSDB : US Hazardous Substances Data Bank, http://toxnet.nlm.nih.gov/
- CCRIS : US Chemical Carcinogenesis Research Information System, http://toxnet.nlm.nih.gov/
- IARC : International Agency for Research on Cancer, http://monographs.iarc.fr/
- JP NITE : Japan National Institute of Technology and Evaluation, http://www.safe.nite.go.jp/

※ Hazards Testing and Classification

Korea MSDS Testing Laboratory

Website : www.msdskorea.com

Telephone : +82 31 337 3701 / 3702

Address : #12, Iwon-ro, Ihdong-myeon, Cheoin-gu, Yongin-city, Gyeonggi-do, Republic of Korea

This SDS' composition/information on ingredient(s) is provided by the mentioned company in this SDS' section 1.

This SDS is composed in line with Korea Occupational Safety and Health Act (KOSHA) Article 41, to protect the health of the employees, and for documentation.

This SDS is composed with reference to criteria provided by KOSHA.

- End -