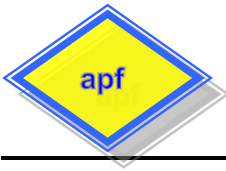




**RISALAH DATA KESELAMATAN KIMIA
/
SAFETY DATA SHEET**

**NAMA PRODUK : ZINK OKSIDA
PRODUCT NAME : ZINC OXIDE**

REVISION NO	REVIEW DATE	REVIEWED BY	APPROVED BY
F	7.02.2018	S.PARTHASARATHEE QA EXECUTIVE	JOHN CHONG MANAGING DIRECTOR



SAFETY DATA SHEET

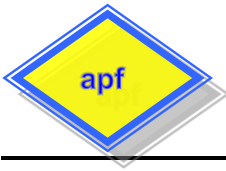
SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details:-

Product Name : Zinc Oxide
Trade Name : Red Seal / White Seal / Pharma
Chemical Name : Zinc Oxide
Synonyms : Zinc White, Flowers of Zinc, Philosopher's Wool, Chinese White.
Chemical Formula : ZnO
Molecular Weight : 81.39
CAS Number : 1314-13-2
EC Number : 215-222-5
Chemical Family : Metallic Oxide
Manufacturer's Name : Aprofit Zinc Oxide Mfg Sdn Bhd
Manufacturer's Code : 223363 - P
Uses : Accelerator, activator, pigment and reinforcing agent in rubber; ointment; pigment and mold growth inhibitor in paints; ceramics; floor tile; glass; Zinc salts (Zinc Stearate etc) feed additive; semi-conductor in electronic devices; electronic ceramics, raw material to produce Zinc Phosphate as steel coating.

1.2 Company Identification:-

Manufacturer's Name & Address : Aprofit Zinc Oxide Mfg Sdn. Bhd.
Lot 102, Lorong Senawang 4/2,
Senawang Industrial Estate,
70450 Senawang.
Negeri Sembilan Darul Khusus.
Emergency Tel. No. : 03-80682288 / 06-6775239 (Office Hour).
: 012-2971783 (After Office Hour).



SECTION 2 : HAZARD IDENTIFICATION

The substance is not classified as hazardous according to 29 CFR 1910 (OSHA GHS)

Label elements

Hazard pictograms:



Hazard statements:

H410 very toxic to aquatic life with long lasting effects

WHMIS classification: Not controlled

Precautionary statements

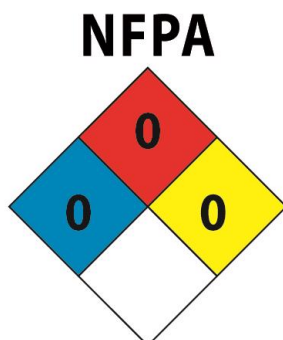
P262 Do not get in eyes, on skin, or on clothing
If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and continue rinsing.

P403, P233 Store in a well-ventilated place. Keep container tightly closed

P273 Avoid release to the environment

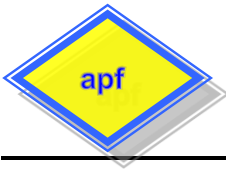
P501 Disposal of contents/container as hazardous or special waste in accordance with applicable law.

Classification system:



HMIS

Health Hazard	0
Fire Hazard	0
Reactivity	0



SECTION 3 : COMPOSITION OF /INFORMATION ON INGREDIENTS

Product/Ingredient : Zinc Oxide
CAS No. : 1314-13-2
EINECS : 215-222-5
RTECS No. : ZH4810000
Proportion : Essentially 100%

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SECTION 4 : FIRST AID MEASURES

Ingestion : Provide rest, warmth and fresh air. Rinse mouth and drink plenty of water. Seek medical attention if vomiting or person is unconscious.

Eye Contact : Immediately flush eyes with plenty of running water for at least 15 minutes. Seek medical attention if irritation occurs.

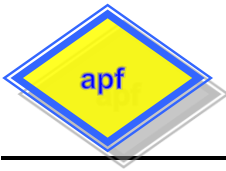
Skin Contact : Wash skin with soap and water. Wash clothing before reuse. Call a physician if irritation occurs.

Inhalation : Move to fresh air and keep at rest. If breathing is difficult get immediate medical attention.

SECTION 5 : FIRE FIGHTING MEASURES

Fire& Explosion Hazards : Not flammable
Flash point : Not Applicable
Auto-ignition temperature: Not Applicable
Extinguishing media : Non Combustible

Fire fighting instruction: Use extinguishing media appropriate to surrounding fire conditions. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.



Special hazards arising from the substance or mixture:

This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special hazards : May emit toxic fumes under fire conditions.

SECTION 6 : ACCIDENTAL RELEASE MEASURE

Leak/Spill : Utilize recommended protective clothing and equipment. Clean spills in a manner that does not disperse dust into the air. Recover the product and place in appropriate containers. The containers should be labeled, clean, dry and fitted with a cover. Dispose per published norms and/or contact the manufacturer for assistance and recommendation on disposal of the product. Collect wash water for approved disposal. Observe any Federal, State or local rules relative to disposal of the material.

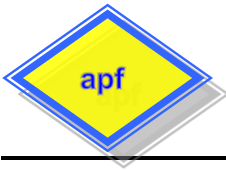
Environmental : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

SECTION 7 : HANDLING AND STORAGE

Storage Temperature (min/max) : Ambient / Ambient.

Shelf Life : 3 years, if tightly closed and properly stored, in dry cool place.

Special Sensitivity : None.



- Handling : Avoid release to environment. Avoid breathing dust. Avoid getting in eyes or on skin. Wash thoroughly after handling
- Storage : Store in a dry place away from direct sunlight, heat and incompatible materials. Store away from food and beverages. Containers of this material may be hazardous when empty since they retain product residues (dust/ solids); observe all warnings and precautions listed for the product

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit :-

- OSHA Final PELs : 5mg/m³ TWA (fume) 15mg/m³ TWA (total dust)
5mg/m³ TWA (respirable fraction)
- OSHA Vacanted PELs : 5mg/m³ TWA (fume) 10mg/m³ TWA (total dust);
5mg/m³ TWA (respirable fraction)
- ACGIH : 2mg/m³ TWA (respirable fraction); 10 mg/m³
STEL (respirable fraction)
- NIOSH : 5mg/m³ TWA (dust and fume) 500mg/m³ IDLH

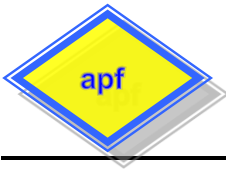
Eye protection : Safety glasses or chemical safety goggles are recommended.

Skin protection : Rubber gloves with impervious boots, apron or coveralls is recommended. Employees should wash their hands and face before eating, drinking or using tobacco products.

Respiratory protection : Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a DOSH approved dust respirator must be worn.

If the concentration is over 250 mg/m³:

- : Requires an air purifier respirator with full facial unit complete with high efficiency particle filter, positive pressure or standard respirator complete with full facial unit.



If the concentration is over 2500 mg/m³:

: **Self-contained half mask apparatus.**

GLOVES: *protective gloves

CLOTHES:*appropriate working clothes.

EYE PROTECTION:*anti-splash or anti-dust safety goggles. Do not use contact lenses as safety equipment.

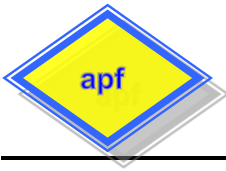
Ventilation requirement : **Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.**

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical Form	: Fine Powder
Colour	: White to Yellowish - White
Odour	: Odourless
Solubility	: Insoluble in water/alcohol; soluble in dilute acids.
Solubility in water	: 0.16mg/100ml (30 ⁰ C)
Boiling Point	: 2360 ⁰ C
Melting Point (⁰ c)	: 1975 ⁰ C
Vapour Pressure (mm of Hg at 25 ⁰ C)	: Not Applicable
Percent Volatiles	: Not Applicable
Evaporation Rate	: Not Applicable
Density	: 5.606g/cm ³
Specific Gravity	: 5.47

SECTION 10 : STABILITY AND REACTIVITY

Conditions to Avoid	: Excessive temperatures. (Zinc oxide sublimates to produce toxic fumes)
Stability	: Stable under ordinary conditions of use and storage.
Hazardous Polymerization	: Will not occur.
Incompatibilities	: Strong Oxidizing Agents.



Chlorinated rubber : Violent reaction or explosion with Zinc Oxide at 215°C

Flax oil : Exothermic reaction with possibility of ignition.

Magnesium : If heated: explosive reaction.

Strong bases and acids : Possibility of violent reaction

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicity Data : ORL-HMN LDLO: 500 mg/kg YAKUD5 22,291,1980
IPR-RAT LD50: 240 mg/kg ZDKAA8 38(9),18,1978
ORL-MUS LD50: 7950 mg/kg GISAAA 51(4),89,1986
IHL-MUS LC 50: 2500 mg/m³ IPSTB3 3,93,1976

Irritation Data: SKN-RBT 500mg / 24h MLD 28 ZPAK -,10,1972
EYE-RBT 500mg / 24h MLD 28 ZPAK -,10,1972

Carcinogenicity: This product is not listed by NTP, IARC or regulated as carcinogen by OSHA.

EFFECTS OF OVEREXPOSURE

Route of Entry

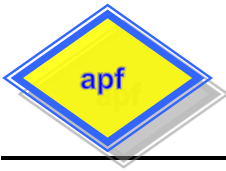
Effects

Inhalation : May irritate the respiratory tract. Symptoms may include coughing, shortness of breath, sore throat and runny nose. If sufficient amounts are inhaled and absorbed, symptoms may resemble those in acute ingestion.

Skin : Irritation with symptoms of redness, swelling, itching and pain.

Eye : Irritation with symptoms of redness, swelling, itching, tearing and pain.

Ingestion : May cause gastroenteritis with abdominal pain, nausea, vomiting and diarrhea. Systemic effects may follow and may include ringing of the ears,



dizziness, elevated blood pressure, blurred vision and tremors.

Chronic Effects: Prolonged skin contact can produce a severe dermatitis called oxide pox. Severe overexposure may result in bronchitis or pneumonia with a bluish tint to the skin. Repetitive of prolonged exposure to zinc oxide fumes may cause conjunctivitis.

Medical Conditions Generally Aggravated by exposure :
Persons with pre-existing eye or skin conditions or impaired pulmonary function may be more susceptible to the effects of this product.

SECTION 12 : ECOLOGICAL INFORMATION

Toxicity

Product/ Ingredient name	Result	Species	Exposure
Zinc Oxide	Acute EC50 0.042mg/L. Fresh water	Algae- Pseudokirchneriella subcapitata- Exponential growth phase.	72 hours
	Acute LC50 98ug/l fresh water	Daphnia-Daphnia magna-Neonate	48 hours
	Acute LC50 320ppm fresh water	Fish-lepomis macrochirus	96 hours
	Chronic NOEC 0.017mg/L Fresh water	Algae- Pseudokirchneriella subcapitata- Exponential growth phase.	72 hours

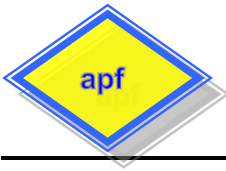
Persistence and degradability: no data available.

Bio-accumulative potential

Product/ Ingredient name	LogPow	BCF	Potential
Zinc Oxide	-	60960	high

Mobility : no data available

Other adverse effects : no known significant effects or critical hazards



SECTION 13 : DISPOSAL INFORMATION

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 : TRANSPORT INFORMATION

US HM-18 : Nil.

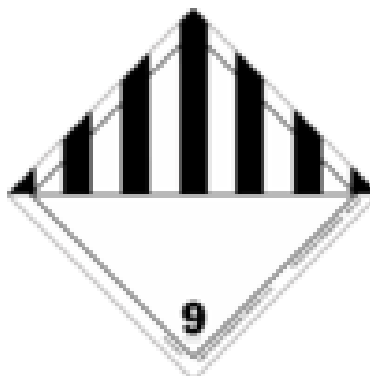
DOT Classification : Hazard class: XCP; Not regulated for domestic transport.

TDG Classification : Not regulated

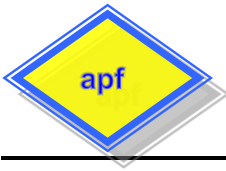
IMO/IMDG : Not regulated

ICAO/IATA : Not regulated

EU ADR/RID, AND/ADNR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide) UN 3077, Class 9, PGIII, Classification Code M7



Above marking are applicable to EU ADR/RID and AND/ADNR only



SECTION 15 : REGULATORY INFORMATION

STATUS INFORMATION

OSHA : This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

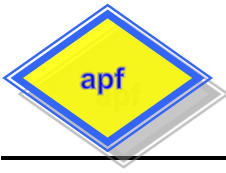
TSCA : On TSCA Inventory.

SARA TITLE III : This product is subject to Sara section 313 reporting requirements.

RCRA : If discarded in its purchased form, this product would not be hazardous waste either by listing or characteristic. However under RCRA, it is the responsibility of the product user to determine the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24).

CALIFORNIA Proposition 65 : To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

EUROPEAN : EC NO: 215-222-5
Zinc Oxide is not considered environmentally hazardous outside of EU. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Zinc Oxide)UN 3077, Class 9, PG111.
Ingredients listed on the European inventory of existing commercial Chemical substances (EINECS).....Yes, on inventory



SECTION 16 : OTHER INFORMATION

Reason of Issue : **1) Update of Section 2, Hazard information, in accordance to GHS requirements**
2) Standardize format.

NOTIFICATION.

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