

## SAFETY DATA SHEET

Revision date: 02/01/2020

**1. Identity of material and supplier**

Product name	: Zinc oxide
Recommended use	: Industrial
Chemical formula	: ZnO
Physical form of product	: Powder
Company	: PT. CITRA CAKRALOGAM,
Address	: Jl. Raya Selorawan, Beji – Pasuruan, Jawa Timur 67154, Indonesia
Phone / Fax	: (+62) 343-657777 / (+62) 343-657 460
Website	: <a href="http://www.citracakralogam.com">http://www.citracakralogam.com</a>

**2. Hazards identification**

## GHS Classification

Acute aquatic toxicity, Category 1	: H400: Very toxic to aquatic life
Chronic aquatic toxicity, Category 1	: H410: Very toxic to aquatic life with long lasting effects
Environmental hazard	: R50/53: Very toxic to aquatic organisms that may cause long term adverse effects.
Adverse human health effects	
- Inhalation	: May cause irritation to the respiratory tract
- Skin contact	: Repeated or prolong skin contact may cause irritation
- Eye contact	: Excessive dust exposure may cause minor eyes irritation
- Ingestion	: Health hazard if ingested in large quantity may cause abdominal pain, nausea cramps.

**3. Composition and information on ingredients**

Substance name	: Zinc oxide
Content	: > 99.5%
CAS No.	: 1314-13-2
EINECS No	: 215-222-5

**4. First aid measures**

Effects and symptoms	: No specific effects and/or symptoms have been reported or known.
First aid	
- Skin contact	: Rinse immediately with plenty of water
- Inhalation	: Remove victim to fresh air

**PT. Citra Cakralogam**

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- Eye contact : Rinse immediately with clean water for 15 minute
- Ingestion : Immediately rinse mouth with water. Do not induce vomiting. Give water to drink
- Protection of first-aiders : Avoid all unnecessary exposure, use appropriate protection. (See section 8)
- Notes** : **If victim still feeling unwell seek medical attention immediately**

### 5. Fire fighting measures

- Extinguishing media
  - Suitable media : Not combustible. Use extinguishing media on surroundings
  - Unsuitable media : None
- Protection against fire : Dike fire control water for later disposal
- Protection for fire-fighters : Use breathing apparatus (self-contained breathing apparatus with full face shield). Wear suitable protective clothing.
- Hazardous combustion and De-composition products : None

### 6. Accidental release measures

- Personal precautions : Wear protective clothing and gloves. Avoid dust production.
- Environmental precautions : Prevent dispersion. Do not dispose to the sewage system. Keep away from drains surface and ground water. Avoid soil contamination.
- Methods for cleaning up : Collect the spilled materials in the most safe and convenient manner possible and place it to the appropriate container. Reuse/recycle of waste is highly recommended.

### 7. Handling and storage

- Storage : Usual precautions for nuisance dust should be followed. Keep in sealable containers. Store in tightly close packaging. Keep away from acid and bases.
- Handling : Avoid all unnecessary exposure. Use appropriate protection (see Section 8). Avoid dust production.

### 8. Exposure controls/personal protection

- Respiratory protection : Respiratory protection equipment not absolutely necessary
- Hand protection : Impervious gloves
- Material : Leather, cotton or rubber
- Skin protection : Protective working clothes



Eye protection	: Safety glasses
- OSHA Permissible Exposure Limit (PEL)	: fume 5 mg/M3 (TWA) respirable fraction 5 mg/m3 (TWA) total dusts 15 mg/m3 (TWA)
Engineering controls	: Mechanical ventilation is recommended

### 9. Physical and chemical properties

Physical state	: Powder
Appearance	: White to off-white
Odor	: Odorless
pH value	: 7 - 8 (suspension - water)
Molecular weight	: 81.38
Melting point	: 1970 - 1975 °C
Boiling point	: Not applicable
Bulk density	: 300 - 2000 Kg/m3 (DIN 53 466)
Solubility in water	: < 2 mg/l (LISEC BO 016 1997)
Solubility in other ingredients	: Negligible (organic substances). Soluble in acids and bases
Octanol/water partition coefficient	: Not applicable
Explosion limits	: Explosive not (VDI2263)
Oxidation properties	: Not applicable

### 10. Stability and Reactivity

Hazardous reactions	: None
Stability and reactivity	: Stable under normal conditions of handling and storage
Materials to avoid	: Keep away from acid and bases
Conditions to avoid	: None
Hazardous decomposition products	: None

### 11. Toxicological information

Acute toxicity	
- Inhalation	: (rat) 4 hours LC50 > 5.7 mg ZnO/l Klimisch et al 1982
- Dermal	: No data Available
- Ingestion	: (rat) LD50 > 15000 mg ZnO/kg OECD 401
Dermal irritation (rabbit)	: Not irritant. OECD 404

Eyes irritation (rabbit) : Not irritant. OECD 405  
 Chronic toxicity : 50 mg ZnO/day



### 12. Ecological information

Bioaccumulation potential : Not applicable  
 Eco-toxicity : EC50 (Selenastrum capricornutum, 72 H): 170 ug ZnO/l (LISEC 1997)  
 Mobility in soil : Not applicable  
 Persistence and degradability : Not applicable

### 13. Disposal considerations

Disposal : Comply with the local regulations for disposal  
 Waste of residues : S60: This material and its container must be disposed of as hazardous waste  
 Contaminated packaging : Keep waste packaging separate.

### 14. Transport information

Labeling ADR :    
 UN No. : 3077  
 - ADR/RID/ADNR/IMO-IMDG : Class 9  
 HI No. : 90  
 Shipping name :  
 IMDG-Marine pollution : Yes  
 Packing group : III - Tunnel code E, Passage forbidden through tunnels of category E.


### 15. Regulatory information

Globally Harmonized System of classification and Labeling of Chemicals (GHS)  
 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006  
 Hazard class and category code




- Environmental hazards : Hazardous to the aquatic environment - Acute hazard - Category 1 – Warning (CLP : Aquatic Acute 1)
- : Hazardous to the aquatic environment - Chronic hazard - Category 1 – Warning (CLP : Aquatic Chronic 1)

**Labeling**

- Hazard pictograms : 
- Signal words : Warning
- Hazard statements : H410: Very toxic to aquatic life with long lasting effects
- Precautionary statements
- Prevention : P273 : Avoid release to the environment
- Response : P391 : Collect Spillage
- Disposal considerations : P501 : Dispose of this material and its container to hazardous or special waste collect point, in accordance with local, regional and/or international regulation.

**EC Labeling**

- EC classification : N; R50/53

- Symbol(s) : 
- R Phrase(s) : R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- S Phrase(s) : S60: This material and its container must be disposed of as hazardous waste.  
S61: Avoid release to the environment. Refer to special instructions/Safety Date Sheets

**16. Other information including information on preparation and revision of the SDS**

- Product information : Registry Toxic number (RTECS/NIOSH)
- Risk Phrases : R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.