Safety Data Sheet

According to Regulation of The Globally Harmonized System of Classification & Labeling of Chemicals.

1. Identification Of The Substance / Preparation And Company

Product Information： Zinc Oxide

Catalogue No.: 41101, 41103,41106, 41107, 51103,49104

Information On Producer/ Supplier Name：Pan-Continental Chemical Co., Ltd.

Addresses： No. 159, Chingnian Rd., Tachia (437), Taiwan.

Phone：: +886-4-26811401

Emergency Phone / Fax： +886-4-26811401/ +886-4-26811523

2. Hazard Identification：

Hazard category :

Contents of indication：Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Else Hazard： -

3. Composition/Information On Ingredients

English Name： Zinc Oxide

CAS-No : 1314-13-2 EC-No: 215-222-5 ATCvet code: QA07XA91

M : 81.37 g/mol

Formula Hill : OZn

Chemical formula: ZnO

4. First Aid Measures：

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open.

After swallowing: make victim drink water (two glasses at the most). Consult doctor if feeling unwell.

5. Fire Fighting Measure

Suitable extinguishing media:

In adaption to materials stored in the immediate neighborhood.

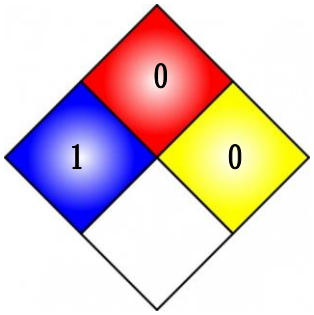
Special risks:

Non-combustible. Ambient fire may liberate hazardous vapours.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

National Fire Protection Association (U.S.A.):
Health: 1
Flammability: 0
Reactivity: 0
Specific hazard:



Other information:

Prevent fire-fighting water from entering surface water or groundwater.

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6. Accidental Release Measures

Person-related precautionary measures:

Avoid inhalation of dusts.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

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7. Handling And Storage：

Handling： No further requirements.

Storage： Tightly closed. Dry. Storage temperature : no restrictions.

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8. Exposure Control/Personal Protection

Personal Protective Equipment：

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory Protection：required when dusts are generated. Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances.

Eye protection : required

Hand Protection：Wear protective gloves and clean body-covering clothing.

Skin & Body Protection： required

Hygiene Procedures： Change contaminated clothing. Wash hands after working with substance.

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9. Physical And Chemical Properties / Characteristics

Appearance： white powder.	Odor： Odorless.
Odor threshold：-	pH value： approx. 7
Melting Point： 1975 ℃ (decomposition)	Boiling Point： not applicable (sublimed)
Ignition temperature： not combustible	Flash Point： not flammable
Decomposition Temperature： -	Test Method： Open Cup Close Cup
Spontaneous Temperature： -	Exposure Limits： not applicable
Vapor Pressure： -	Bulk density：200~700 kg/m^3
Specific Gravity： 5.61	Solubility In Water： insoluble

10. Stability And Reactivity：

Conditions to be avoided : none

Substances to be avoided : Violent reactions possible with: hydrogen peroxide, magnesium.

Hazardous decomposition products : no information available.

11. Toxicological Information：

Acute toxicity

LC_0 (inhalation, rat): ≥5 mg/m^3 /3 h (Lit.).

LD_{50} (oral, rat): >5000 mg/kg (IUCLID).

LD_{Lo} (oral, human): 500 mg/kg (RTECS).

Subacute to chronic toxicity

Sensitization:

Experience in man: negative. (IUCLID)

Bacterial mutagenicity: Ames test: negative. (in vitro) (IUCLID)

Mutagenicity (mammal cell test): positive. (in vitro) (IUCLID)

Further toxicological information

After skin contact: Slight irritations.

After eye contact: Slight irritations.

Further data

The product should be handled with the care usual when dealing with chemicals.

12. Ecological Information

Biologic degradation:

Inorganic substance. Does not cause biological oxygen deficit.

Ecotoxic effects:

Biological effects:

Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Fish toxicity: Onchorhynchus mykiss LC50: 1.1 mg/l /96 h (ECOTOX Database).
Daphnia toxicity: Daphnia magna EC50: >1000 mg/l /48 h (ECOTOX Database).
Algeal toxicity: Pseudokirchneriella subcapitata IC50: 0.17 mg/l /72 h (External MSDS).

Further ecologic data:
Do not allow to enter water, waste water, or soil!

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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.

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14. Transport Information

BY TRUCK(RID/ADRg) NO DECLARATION REQUIRED
BY SEA(IMDG/cod ONU) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, POWDER, ZINC OXIDE, 9, UN 3077, III
BY AIR(ICAO/IATA ONU) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, POWDER, ZINC OXIDE, 9, UN 3077, III

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15. Regulatory Information：

Symbol:	N	Dangerous for the environment
R-phrases:	50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases:	60-61	This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety data sheets.
EC-No	215-222-5	EC label

U.S Federal Regulation**:**

.: TSCA (Toxic Substance Control Act) Status
TSCA (United States) the international ingredients of this product are listed
CERCLA RQ – 40 CFR 302.4(a): Not Listed
SARA 302 Components – 40 CFR 355 Appendix A: None
RCRA 261: TCLP Determination Pb, Cd
DOT 172: Not Regulated
FCC: Listed
Color: 73.1991, 2991
SARA 311/312: Yes (Acute)
SARA 313: Compounds: Zn, Pb
U.S. EPA Reg. No. 71645-3
U.S. EPA PC Code: 088502
U.S. TRI Reproductive Toxin – Yes
U.S. TRI Development Toxin - Yes

Canada:

WHMIS Classification - not controlled
Domestic substance list (DSL) - listed

European Union:

EC # 215-222-5
Zinc oxide is not considered environmentally hazardous outside of the EU.
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Zinc Oxide) UN 3077, Class 9, PG III.
Ingredients listed on the European inventory of existing commercial
Chemical substances (EINECS)……Yes, on inventory
WARNING. H410: Very toxic to aquatic life with long lasting effects.
P273: Avoid release to the environment.
P391: Collect spillage.
P501: Disposal of contents/ container as hazardous or special waste in
accordance with applicable law.

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16. Applications

The applications of zinc oxide powder are numerous, and the principal ones are summarized below.

Pharmaceuticals, cosmetics, antiseptic, soaps, ointments, animal feed, zinc chemicals, zinc pigments, inorganic pigments, matches,paints and coatings, dyes, ceramics, plasters, floor tiles, enamels, plastics, rubber compounds, tyres, polymers, semiconductor, ferrites, varistors, additive in lubricants, catalysts, among others.

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17. Other Information：

Issuer： JEN-HO HSU

Dept: QA Dept.

Company: Pan-Continental Chemical Co., Ltd.

Date :2017-Jan.06