UNION MINIERE

Material Safety Data Sheet

417-W

Y/Ref. :
O/Ref. : US

ZINC OXIDE EPM-E	ISSUED DATE	REVISED DATE
	04/20/1993	27.07.1998

SECTION I

Importer :
SOGEM USA Inc.
Magnolia building, Suite 110
3120 Highwoods Boulevard
Raleigh, NC 27604

Emergency Telephone Number :
transport emergencies : CHEMTREC
phone (800) 424 - 9300
Telephone Number for General Information : 919 874 7171

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous components	CAS Nr.	Weight %	OSHA : PEL-TWA	ACGIH : TLV - TWA	Remarks
Zinc oxide	1314-13-2	99.5	ZnO fume : 5mg/m³ ZnO total dust : 15 mg/m³ respirable fraction : 5 mg/m³	ZnO fume : 5mg/m³ - STEL : 10 mg/m³ ZnO dust : 10 mg/m³	

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	: N/A	**Specific Gravity (H_2O = 1)**	: 5.6
Vapor Pressure (mm Hg.)	: N/A	**Melting Point**	: 1970°C
Vapor Density (AIR = 1)	: N/A	**Evaporation Rate (butyl acetate = 1)**	: N/A
Solubility in Water	: insoluble in water.		
Appearance and Odor	: powder, odorless.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) : N/A **Flammable Limits:** N/A **LEL** : ... **UEL** : ...

Extinguishing Media : a) recommended : any extinguishing media can be used.
b) to avoid : none known.

Special Fire Fighting Procedures : Fire Fighters should wear proper protective clothing and approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards : at very high temperatures, harmful fumes may be formed.

Productname : zinc oxide EPN

SECTION V : REACTIVITY DATA

Stability : Unstable : no. Stable : yes. **Conditions to Avoid :** none known.

Incompatibility (Materials to Avoid) : none known.

Hazardous Decomposition or Byproducts : none.

Hazardous Polymerization : May occur : no. Will not occur : yes. **Conditions to avoid :** none known.

SECTION VI : HEALTH HAZARD DATA

Possible routes of entry : Inhalation : x Ingestion : x Skin :

Acute hazards :

Inhalation :
LC_{50} inhalation, mouse : 2500 mg/m³. Inhalation is irritating for the respiratory tract.
Zinc fever may be caused by freshly formed fumes of ZnO during the manufacturing process, but not be the product as it is packed and sold.

Ingestion :
LD_{50} oral, mouse : 7950 mg/kg.
Large oral doses may produce intestinal obstruction and nausea, fever and stomach cramps.

Skin contact :
Excessive skincontact may cause itching.

Eye contact :
Pulverulent product : moderately irritating to the eyes.

Chronic Effects :

No data available.

Irritation/sensitization :

Moderately irritating.

Medical conditions which may be aggravated by exposure :

None known.

Emergency and first aid procedures :

Inhalation : In case of Inhalation, terminate exposure immediately and move to fresh air. If necessary, obtain medical attention.

Ingestion : Drink lots of water immediately. Contact a physician.

Skin contact : Wash with soap and water.

Eye contact : Rinse eyes with large amounts of water, including under eyelids. Obtain medical attention if irritation occurs.

SECTION VII : PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled :
Collect spilled zincoxide by any suitable means and return to process, or to producer for recovery. Use approved respiratory protection against fumes/dust if the occupational exposure limit could be exceeded. Prevent zincoxide from entering into surfacewaters.

Waste disposal method :
Waste disposal methods must comply with federal, state and local disposal or discharge laws. Zinc oxide should be recycled.

Precautions to be taken in handling and storing :
Avoid breathing fumes or dust, and contact with skin and eyes. Use approved respirators if the occupational exposure limit is exceeded.
Normal storage conditions in order to avoid deterioration of the product by carbonization, but presenting no risks for the operators and the natural environment.

Other precautions :
No other special precautions needed.

SECTION VIII : CONTROL MEASURES

Respiratory protection (specific type) :
Approved respiratory protection (dust mask) is required if airborne dust concentration exceeds the occupational exposure limits. Periodic air quality testing is needed to insure adherence to acceptable levels.

Ventilation :
Use sufficient local exhaust ventilation to keep dust and fume concentrations below occupational exposure limits.

Protective gloves :
Wear suitable gloves.

Eye protection :
Wear safety glasses.

Other protective clothing or equipment :
No other special precautions needed.

Work/Hygienic Practices :
Practise good personal hygiene procedures. Wash hands prior to eating, drinking or smoking. Avoid ingestion or inhalation of zincoxide.

General :
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SECTION IX : ADDITIONAL INFORMATION

TRANSPORT INFORMATION :

UN nr. :	not applicable
IMDG-Code :	" "
ICAO/IATA :	" "
ADR/RID nr. :	" "

REGULATORY INFORMATION :

a) CERCLA Hazardous Substance : ■ yes ☐ no
Reportable quantity : 1 lb (*)

b) SARA, title III, Extremely Hazardous Substance ☐ yes ■ no
Reportable quantity : not applicable
Treshold planning quantity : not applicable

c) Toxic Chemical Release Report
Zinc (fume or dust) is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-know Act of 1986 and 40 CFR Part 372.

d) Zinc compounds are listed under TSCA approval.

(*) No reporting of release of this hazardous substance is required if the diameter of the pieces of the solid metal is equal to or exceeds 100 micrometers (0.004 inches).

REFERENCES :

PERMISSIBLE CONCENTRATION REFERENCES
- OSHA (U.S. Occupational Safety & Health Administration, PEL : Permissible Exposure Limit).
- ACGIH TLV - TWA : American Conference of Governmental Industrial Hygienists (Threshold Limit Value - Time Weighted Average), edition 1997.

HAZARD INFORMATION REFERENCES
- RTECS : Registry of Toxic Effects of Chemical Substances; NIOSH, edition January 1997.

GENERAL
- Sax's Dangerous Properties of Industrial Materials, 8th edition, Richard J. Lewis Sr.

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