

SAFETY DATA SHEET

SECTION: 1.1 PRODUCT IDENTIFICATION

Product Name: Zinc Oxide (ALL SIZES), Zinc Oxide Powder (ALL SIZES)
Common Uses: Coloring agent/pigment, rubber compounding, zinc chemical manufacturing, pharmaceutical/laboratory chemicals, agriculture, electronics, ceramics, plating agent, process regulator, fertilizer, photosensitive agents & photo-chemicals
UN #: 3077
CAS #: 1314-13-2

SECTION: 1.2 COMPANY IDENTIFICATION

Company: Essential Depot, Inc.
4605 Oak Circle
Sebring, Florida 33875
Phone: 863-662-0481
Emergency Phone: CHEMTREC, Inside the USA: 1-800-424-9300

SECTION: 2. COMPOSITION / INFORMATION INGREDIENTS

Note: all other constituents are found at trace levels, for further information please consult the individual product grade TDS.

Compositions:	Component Name	Identifiers	% Composition
	Zinc Oxide (ZnO)	CAS: 1314-13-2 EC215-222-5	95-100
	Lead (PbO)		<0.15%*
	Cadmium (CdO)		<0.25%*

- Value is the maximum but typically limits are lower.
All other constituents are found at trace levels or are not regulated.

SECTION: 3. HAZARDS IDENTIFICATION

Classification of the substance or mixture: Not regulated

GHS Classification: Aquatic Chronic 1, H410

GHS Labeling Zinc Oxide. Signal word: Warning.
H410: Very toxic to aquatic life with long lasting Effects.
P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of contents/container as hazardous or special waste in accordance with applicable law.



If transported outside the U.S. by air or sea, use this label.

SECTION: 4. FIRST AID MEASURES

Skin Contact: Immediately wash with soap and water. Seek medical attention if irritation occurs.

Eye Contact: Immediately flush eyes with plenty of water. Get medical attention if irritation occurs.

Ingestion: Drink plenty of water. Do not induce vomiting. Seek medical attention or contact Poison Control.

Inhalation: Remove victim to fresh air. Seek medical attention if feeling unwell or experiencing respiratory distress

Most important symptoms and effects, both acute and delayed:

Acute: Dry cough, headache, throat irritation

Delayed: No delayed symptoms or effects expected

Indication of any immediate medical attention and special treatment needed: Bad cough, headache, and/or nausea. Move effected individual to fresh air.

SECTION: 5. FIRE FIGHTING MEASURES

Use an extinguishing media suitable for the surrounding fire

Suitable Extinguishing media:

Unsuitable Extinguishing Media: None Known

Hazards from the substance: Water contaminated with this material must be contained and prevented from being discharged to the environment

Hazardous thermal decomposition products: Decomposition products may include Zinc Oxide fumes at high temperatures

Special protective actions for fire-fighters: No special measures required

Special protective equipment for fire-fighters: Suitable breathing apparatus

SECTION: 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid breathing dust. Refer to Section 7 and Section 8 for advice on handling/storage and PPE

Spill Cleanup Recommendation: Avoid dry sweeping or other methods which raise dust. Vacuum or wet-sweep and place into a suitable closable, labeled container for disposal. Dispose of waste via licensed waste disposal contractor.

Environmental Precautions: Prevent contamination of soil, drains, and surface water. Inform relevant authorities of spill where required.

SECTION: 7. HANDLING AND STORAGE

Precautions for Safe Handling: This product should be used in accordance with good industrial safety practices and industrial hygiene standards and all local, state, federal, and international regulations. Avoid creating airborne dust. Ensure adequate exhaust ventilation. Workers who handle material should wear gloves and thoroughly wash hands/forearms after exposure. See Section 8 if exposure exceeds limits.

Conditions for Safe Storage/Instabilities: This product should be stored in accordance with all local, state, federal and international regulations. Store in a cool, dry, well-ventilated space sealed tightly in the original containers. Protect containers from damage and repair if damage occurs. Use all product within 1 year.

SECTION: 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits:

CONTROL PARAMETERS			
Product/Ingredient Name	8 Hour TWA (mg/m)	15 min STEL (mg/m)	References
USA	5 (Fumes) 10 (Dust)	10 (fumes)	ACGIH (1991)(guidance values)
USA	5 (Fumes) 10 (Dust); total 5 (Dust, respirable)		OSHA (1989) legal limit values)
The Netherlands	5 (Fumes)		SZW (1997)
Germany	5 (Fumes) 6 (Dust)		DFG (1997)
UK	5 (Fumes) 10 (Dust)		HSE (1998)
Sweden	5 (Fumes)		National Board of Occupation Safety and Health, Sweden (1993)
Denmark	4 (Fumes) 10 (Dust)		Arbejdstilsynet (1992)

EXPOSURE CONTROLS:

- Respiratory Protection:** Avoid creating dust. If exposure levels exceed limits, respiratory protection approved for the work being performed must be worn.
- Hand Protection:** Always wear glove approved for the work being performed when handling Zinc Oxide.
- Skin Protection:** Wear normal chemical work clothing.
- Eye Protection:** Always wear approved protective eyewear if there is a potential for dust being created while handling the material.
- General Protective Hygiene Measures:** Use local exhaust ventilation to pro-actively reduce dust levels.

OTHER:

- Route(s) of entry:** Inhalation and mechanical irritation of eyes and skin
- Carcinogen Status:** Not a NTP/IARC carcinogen
- Signs and symptoms of Exposure:** Dry throat, cough, and dry itchy skin

Notes: Excess bulk exposure may cause acute respiratory irritation or dry skin

SECTION: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White, cream, or yellowish color
Description:	Fine powder
Typical Particle Size:	D50 typically.1 µm
Flammability Limits:	Zinc Oxide is not flammable
Explosive Limits:	Zinc Oxide is not explosive
Odor:	Odorless
Vapor Pressure:	@1500C = 12 mm HG
Odor Threshold:	Odorless
Vapor Density:	N/A
pH:	Neutral
Relative Density:	Varies
Melting point:	1975 °C
Solubility in water:	2.9 mg/Le
Boiling Point:	N/A
Flash Point:	Not flammable
Evaporation Rate:	N/A
Specific Gravity:	5.68
Molecular Weight:	81.38
Suggested Solvents:	Acids and bases
Fire qualities:	Will not burn
Explosive Qualities:	Not explosive
Volatile:	0.3% nominal

SECTION: 10. STABILITY AND REACTIVITY

Reactivity:	Stable under normal, dry conditions
Chemical stability:	This product is stable
Possibility of hazardous reactions:	None

Conditions to avoid or incompatible materials: Heated magnesium. Chlorinated rubbers above 215C

Hazardous decomposition products: Potential for ZnO fumes at elevated temperatures

SECTION: 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Routes of Entry: Oral, Inhalation

Acute Toxicity: LD50 (rat, Inhalation): 7,950 mg/kg (Encyclopedia of Toxicology: Reference Book 2005)

Chronic Toxicity: NOAEL: 50 mg/day (based on human clinical studies)

Mutagenicity: No data available

Carcinogenicity: No data available. Not listed as an IARC Carcinogen. Not listed in the NTP report on carcinogens.

Acute Exposure Symptoms

Eye Contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the respiratory tract

Skin Contact: No known significant effects or critical hazards

Ingestion: No known significant effects or critical hazards

SECTION: 12. ECOLOGICAL INFORMATION

Toxicity

Product Name	Result	Species	Dose	Exposure	Reference
Zinc Oxide	LC50 Inhalation Dusts and mists	Rat	>5.7mg/L	4 Hours	Klimisch and Freisberg (1982)
Zinc Oxide	LD50 Oral	Rat	15000mg/kg	N/A	Löser (1972)
Zinc Oxide	LD50 Oral	Rat	>5000mg/kg	N/A	Löser (1977)

Persistence and degradability:	Not rapidly degradable
Bio-accumulative potential:	No evidence to indicate significant bio-accumulative potential
Mobility in soil:	No evidence to indicate significant mobility in soil
Results of PBT and vPvB assessment:	ZnO is not PBT or vPvB.
Other adverse effects:	None

SECTION: 13. DISPOSAL CONSIDERATION

Waste treatment methods

Product:

Generation of product waste should be minimized wherever possible. Disposal of product, solutions, and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements. Dispose of surplus and non-recyclable products via licensed waste disposal contractor. Waste should not be released into sewer system unless regulations permit such release

Containers/Packaging:

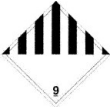

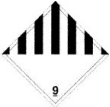

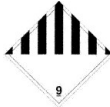

Generation of packaging waste should be minimized wherever possible. Waste packaging should be recycled when possible. Incineration and/or landfill dumping should only be considered when recycling isn't feasible. Make sure to follow all local, state, federal, and international regulations when disposing of packaging materials.

SECTION: 14. TRANSPORT INFORMATION

NAFTA Tariff Class:	2817.00.0000, Sched. B.
Country of Origin:	U.S.A.
Responsible party:	Essential Depot Inc.
Classification code:	M7 (Formerly: Item Number 12C)
Hazard identification / reconnaissance #:	90
NMFC Class:	55
USDOT Information:	This material is not regulated for U.S., Mexico, or Canada shipments

EU Information

	ADR/RID	IMDG	IATA
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UN Number	UN3077	UN3077	UN3077
UN proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC OXIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC OXIDE), MARINE POLLUTANT (ZINC OXIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC OXIDE)
Transport hazard Class(es)*	 	 	 
	Hazard Identification Number: 90	Sea (IMO): DG, MP	IATA Label: Miscellaneous
Packing Group	III	III	III
Environmental Hazards	Yes	Yes, Dangerous to the environment	Yes
Special precautions for users	No	No	Yes (see below)
Additional Information	Tunnel code (E)		
IATA special precautions for users	IATA- Passenger Aircraft:		400kg (packing group 956)
	IATA- Passenger Aircraft:		30kg (packing group Y956)
	IATA- Cargo Aircraft:		400kg (packing group 956)
	IATA-S.P.:		A97, A158, A179

*The EU diamond for Dangerous to the Environment has a red border. A copy of this document may not be in color resulting in the above border incorrectly being displayed in black.

SECTION: 15. REGULATORY INFORMATION

U.S.A. Regulations

- USDOT:** Not Transport regulated, 49 CFR 172
- SARA 302:** Yes, name listed (Zinc). RQ= None, TPQ= None
- SARA311/312:** Yes, acute hazard, 29 CFR 1200
- SARA313:** Yes, Zn & Pb compounds
- CA Prop.65:** Yes, Pb & Cd
- CAA 112, 61 HAP:** No, not regulated, no HAP's
- FIFRA 152 et seq.:** No (product is not subject to FIFRA)
- CERCLA 102/103:** Name List, RQ=None

NSF 60/61: Submitted NSF, UL
FCC: Listed
CONEG: Compliant
ODS/ODC 82: No
TSCA: Yes, on Inventory, Compliant with TSCA, Notification not required
RCRA 261: If governing spec is >1000 ppm Pb or >20 ppm Cd, product must be TCLP tested for Pb and Cd to determine if waste product is subject to RCRA
USFDA: Listed as GRAS at 21 CFR 182.8991

TSCA Equivalent 'inventory' regulations

AICS: Yes
SWISS: Yes
PICCS: Yes
DSL: Yes
NDSL: No
ASIA-PAC: Yes
EINECS: Yes, on inventory
ELINCS: No, notification/reporting not required

EEA:

This SDS is believed to comply with GHS-CLP, EEA/EUI REACH, HCS 2012 and SDS rules

EU REACH Information

Product Origin: 01-2119463881-32-0075 (Tonnage >1000 t/year)
P.R.C. Pre-Registration #: 05-2114620034-66-0000
Brazil Pre-Registration #: 05-2114626885-37-0000

SECTION: 16. OTHER INFORMATION

HMIS Hazard Rating (Paint and Coating Industry)

Health: 1 (Slight)
Flammability: 0
Reactivity: 0

Personal Protection: E (in bulk dust conditions: Gloves, mask, and googles are recommended).

GHS Labeling

Zinc Oxide. Signal word: Warning.

- H410:** Very toxic to aquatic life with long lasting effects.
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Creation Date: September 2, 2016

Revision Dates: April 15, 2024
April 18, 2019

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