SUPREME PETRO CHEMICALS
IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS · SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

SAFETY DATA SHEET (SDS)

Zinc Oxide *SDS*

REV 3.1
29 JULY 2026
GHS REV.11 (2025)

CAS **1314-13-2** EC **215-222-5** SIGNAL WORD **DANGER**

GHS08
Health Hazard

GHS09
Environmental Hazard

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product Name	Zinc Oxide
Product Type	Zinc Oxide — industrial chemical
Chemical Family	Inorganic zinc compound
CAS No.	1314-13-2
EC No.	215-222-5
Intended Use	Industrial / professional use as described on the SPC product page.
Restrictions on Use	Industrial / professional use only. Confirm suitability for final application before use.
Supplier	Supreme Petro Chemicals
Address	No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
Emergency Contact	Sanketh — +91 86087 80096 · Sudarshan — +91 81979 47045
Email	admin@supremepetrochemicals.com
Product Page	https://www.supremepetrochemicals.com/products/zinc-oxide
SDS Revision	July 2026
SDS Version	3.1

SECTION 2 HAZARD IDENTIFICATION

GHS/CLP Classification: Repr. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1

Signal Word	DANGER
GHS Pictograms	GHS08 (Health Hazard) · GHS09 (Environmental Hazard)

SUPREME PETRO CHEMICALS
IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS · SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road,
Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

HAZARD STATEMENTS

- H361 — Suspected of damaging fertility or the unborn child
- H370 — Causes damage to organs (single exposure; see Section 11 and verify organ specificity with supplier SDS)
- H372 — Causes damage to organs through prolonged or repeated exposure (inhalation of dust/fume)
- H400 — Very toxic to aquatic life
- H410 — Very toxic to aquatic life with long lasting effects
- H333 — May be harmful if inhaled (see flag — verify against final classification)

PRECAUTIONARY — PREVENTION

- P260 — Do not breathe dust or fume.
- P271 — Use only outdoors or in a well-ventilated area.
- P272 — Contaminated work clothing should not be allowed out of the workplace.
- P273 — Avoid release to the environment.
- P280 — Wear protective gloves / eye protection / face protection.

PRECAUTIONARY — RESPONSE / STORAGE / DISPOSAL

- P301+P310 — IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P304+P340 — IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P312 — Call a POISON CENTER or doctor if you feel unwell.
- P331 — Do NOT induce vomiting.
- P391 — Collect spillage.
- P403+P235 — Store in a well-ventilated place. Keep cool.
- P405 — Store locked up.
- P501 — Dispose of contents/container in accordance with local regulations.

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	EC NO.	% W/W	GHS CLASSIFICATION
Zinc Oxide	1314-13-2	215-222-5	100	Repr. 2 (H361); STOT RE 1 (H372); Aquatic Acute 1 (H400); Aquatic Chronic 1 (H410)

Full text of H-statements listed in Section 16.

SECTION 4 FIRST AID MEASURES

Inhalation	Remove person to fresh air immediately. Keep at rest in a position comfortable for breathing. If symptoms persist (cough, chest tightness, metal fume fever symptoms), seek medical attention.
Skin Contact	Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Seek medical attention if irritation or symptoms persist.
Eye Contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
Ingestion	Rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical advice immediately.
Note to Physician	Treat symptomatically. Inhalation of ZnO fume may cause metal fume fever (delayed onset — chills, fever, myalgia). Supportive treatment; no specific antidote.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Zinc Oxide is non-combustible. Use extinguishing media appropriate to surrounding fire (water, CO_2, dry chemical, foam).
Unsuitable Media	Avoid direct high-pressure water jet that may disperse fine powder and create dust clouds.
Specific Hazards	Non-flammable solid. In fire, ZnO dust may be dispersed; thermal decomposition releases zinc oxide fume which is toxic by inhalation. Containers may rupture when heated.
Protective Equipment	Wear full protective clothing and self-contained breathing apparatus (SCBA). Positive-pressure SCBA required.

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

Special Procedures	Evacuate non-essential personnel. Prevent contaminated fire-fighting water from entering drains and watercourses. Cool containers with water spray to prevent rupture.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate the spill area. Keep unnecessary personnel away. Avoid raising dust. Wear full PPE as per Section 8. Ensure adequate ventilation.
Environmental Precautions	Prevent release to drains, sewers, soil, surface water and groundwater. ZnO is very toxic to aquatic life — contain all spilled material. Notify relevant environmental authorities if significant release occurs.
Containment / Clean-up	Collect spilled material mechanically (vacuum or wet methods to avoid dust dispersal). Place in labelled, compatible, sealed containers. Avoid sweeping dry. Wash down area with water after removal.
Reference to Sections	See Section 8 for PPE; Section 13 for disposal; Section 15 for regulatory information.

SECTION 7 HANDLING AND STORAGE

Handling Precautions	Use in a well-ventilated area or with local exhaust ventilation. Avoid generating and inhaling dust or fume. Avoid contact with skin and eyes. Keep container tightly closed when not in use.
Hygiene	Wash hands thoroughly after handling. Remove contaminated clothing before reuse. Do not eat, drink or smoke when using. Provide eyewash and safety shower in work area.
Storage Conditions	Store in original, tightly closed, compatible containers in a cool, dry, well-ventilated area away from moisture. Inspect containers regularly for leakage or damage.
Storage Temperature	Ambient temperature (unless supplier instructions specify otherwise).
Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Concentrated acids. Halogens. Aluminium chloride at elevated temperature. Magnesium.

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

Segregation	Segregate from food, drink, animal feed, oxidising agents, acids, and incompatible chemicals.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	Zinc Oxide (CAS 1314-13-2): NIOSH REL 5 mg/m³ TWA (fume); OSHA PEL 5 mg/m³ TWA (fume), 15 mg/m³ TWA (total dust); ACGIH TLV 2 mg/m³ TWA (respirable fraction, fume). Verify current local/Indian OEL from regulatory authority. Apply ALARA where OEL not established.
Engineering Controls	Use local exhaust ventilation (LEV) or enclosed processing to control dust and fume. General dilution ventilation where dust generation is minimal. Explosion-proof ventilation not required (non-flammable solid).
Respiratory Protection	Where dust or fume levels may exceed OEL: use NIOSH/EN-approved P95/P100 or FFP2/FFP3 particulate respirator. Use SCBA for emergency response or high-concentration exposure.
Hand / Eye / Skin	Gloves: chemical-resistant gloves (nitrile, neoprene or PVC). Eye/Face: EN 166 / ANSI Z87.1 dust goggles; face shield where splash or dust risk exists. Skin: chemical-resistant apron and safety footwear. Body: chemical-resistant clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off-white fine powder or granules; odourless
Odour	Odourless
Odour Threshold	Not established
pH	6.95–7.37 (5% aqueous suspension at 25°C); not applicable to dry powder
Melting / Freezing Point	~1975°C (3587°F) — NIOSH 2024 / PubChem
Boiling Point / Range	~2360°C (decomposes / sublimes; no defined boiling point at atmospheric pressure)
Flash Point	Not applicable — non-combustible solid
Auto-ignition Temperature	Not applicable — non-combustible solid
Flammability Limits	Not applicable — non-combustible solid
Vapour Pressure	~0 mmHg at 20°C (negligible) — NIOSH 2024
Vapour Density (air = 1)	~2.81 (calculated from MW 81.38 / air 29); verify from supplier SDS

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

Relative Density	~5.6 g/cm³ (bulk density varies by grade; verify supplier COA)
Solubility in Water	Slightly soluble: ~0.0004% (w/v) at 18°C — NIOSH 2024; solubility increases in acids and alkalis
Log Pow (Partition Coeff.)	Not applicable (inorganic solid)
Evaporation Rate	Not applicable (solid)
Viscosity	Not applicable (solid)
VOC Content	Nil

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Avoid extreme heat (above melting point ~1975°C), moisture ingress into stored containers, and contamination with incompatible materials.
Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Concentrated acids and halogens. Aluminium chloride ($AlCl_3$) at elevated temperature. Magnesium. Linseed oil (may heat spontaneously in mixtures).
Hazardous Decomposition	Thermal decomposition at very high temperatures releases zinc oxide fume, which is toxic by inhalation. Carbon oxides and irritating fumes may form in fire involving organic co-materials.
Hazardous Reactions	No hazardous polymerisation. No hazardous reactions under normal storage and handling conditions when stored correctly.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Oral LD50 (rat): >5000 mg/kg (OECD 401; low acute oral toxicity). Not classified for acute oral toxicity under GHS.
Acute Dermal Toxicity	Dermal LD50: data not established; not classified for acute dermal toxicity. Mild skin irritant on prolonged contact.
Acute Inhalation Toxicity	Inhalation of ZnO fume may cause metal fume fever (self-limiting flu-like illness with delayed onset). Not classified for acute inhalation lethality; H333 listing requires supplier confirmation (see flags).
Skin Irritation	Mild skin irritant on prolonged contact. Not classified as skin irritant under GHS Category 1 or 2 based on standard data.
Eye Irritation	Mild mechanical irritant (dust). Not classified as serious eye damage/irritation under GHS.

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

Sensitisation	Not classified as a skin or respiratory sensitiser.
Carcinogenicity	Not classified as a carcinogen by IARC, NTP or OSHA. IARC Group 3 (inadequate evidence) for inhaled zinc oxide. Verify current listings.
Mutagenicity	Not classified as mutagenic (Germ Cell Mutagenicity Cat 1 or 2). In vitro data — verify with supplier SDS.
Reproductive Toxicity	H361 — Suspected of damaging fertility or the unborn child (Repr. Cat 2). Based on animal study data.
Specific Target Organ — Single Exposure	H370 — Causes damage to organs (STOT SE; organ specificity and category require supplier/regulatory confirmation — see flags).
Specific Target Organ — Repeated Exposure	H372 — Causes damage to organs through prolonged or repeated exposure (STOT RE Cat 1; inhalation route — respiratory tract, lungs). Target organ: respiratory system.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	Very toxic to aquatic life (H400, H410). Aquatic Acute 1 and Aquatic Chronic 1. LC50 (fish, 96 h): 1–10 mg/L; EC50 (Daphnia, 48 h): <1 mg/L (zinc ions). Obtain species-specific LC50/EC50/NOEC from ECHA/supplier data for detailed risk assessment.
Persistence / Degradability	Inorganic substance; not biodegradable in the conventional sense. Zinc ions are naturally occurring but can persist and bio-accumulate. Not readily degradable.
Bioaccumulation	Zinc is an essential element at trace levels but toxic to aquatic organisms at elevated concentrations. Bioconcentration factor (BCF) varies by species; verify from ECHA/supplier data.
Mobility in Soil	ZnO dissolves partially in soil water releasing Zn^{2+} ions. Mobility depends on soil pH, organic matter and cation exchange capacity. Can leach to groundwater in acidic or sandy soils.
Other Adverse Effects	Classified as a marine pollutant (aquatic hazard). Avoid uncontrolled release to the environment. Manage releases and waste under applicable local environmental regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents and contaminated material through an authorised waste contractor in accordance with local, state and

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

	national regulations. Do not discharge to drains, watercourses or the environment.
Contaminated Packaging	Empty containers may retain residues; handle as hazardous waste until certified clean. Decontaminate before disposal or recycling. Return to supplier or dispose through approved route.
Indian Regulations	Follow Hazardous Waste (Management, Handling and Transboundary Movement) Rules under the Environment Protection Act, CPCB guidelines, and applicable State Pollution Control Board requirements. Assign waste code under Schedule of the Rules.

SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	UN 3077	UN 3077	UN 3077
Proper Shipping Name	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)
Class	9	9	9
Packing Group	III	III	III
Marine Pollutant	Not applicable (road)	Yes	Not applicable

ZnO is classified as an environmentally hazardous substance (aquatic toxicity) for transport purposes. UN 3077, Class 9, PG III applies when transported in quantities above applicable thresholds. Verify current ADR/IMDG/IATA editions and applicable exemptions with freight forwarder before shipment. Use UN-certified packaging.

SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP	Zinc Oxide is a registered substance under REACH (ECHA). Classified and labelled under EU CLP Regulation (EC) No 1272/2008 as per harmonised classification in Annex VI. Observe REACH, CLP and relevant EU Directives.
OSHA (USA)	Prepared in OSHA HCS/HazCom 2012 aligned 16-section SDS format. ZnO is listed on the TSCA Chemical Substance Inventory. Verify current TSCA/SNUR status before US import or distribution.
India	Observe applicable Indian Manufacture, Storage and Import of Hazardous Chemical Rules (MSIHC), Environment Protection Act, Hazardous Waste Management Rules, CPCB guidelines, Factories Act

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
+91 86087 80096 · +91 81979 47045
admin@supremepetrochemicals.com

	1948, and State Pollution Control Board requirements. Ensure compliance with Customs/EXIM regulations for import.
Other Jurisdictions	Canada WHMIS 2015/HPR: classify and label using Section 2 classification; bilingual SDS/label may be required. China: observe GB/T SDS and GB 30000 classification requirements. Middle East/GCC: observe applicable GHS-aligned local requirements. Australia (AICS): check inventory status before export or import. Regulatory scope limitation: final market placement requires confirmation of local OELs, transport class, waste code and restrictions.

SECTION 16 OTHER INFORMATION

Prepared By	**Supreme Petro Chemicals** — Technical Department
SDS Standard	UN GHS Rev.11 (2025); OSHA HCS/HazCom; EU CLP/REACH Annex II; Canada WHMIS/HPR — 16-section format
Revision Date	24 June 2026
Version	3.0 (supersedes prior issues)
Disclaimer	Information is given in good faith and believed accurate at issue. It does not constitute a specification or guarantee; the user is responsible for safe use, handling and compliance.

FULL TEXT OF H-STATEMENTS

- H333 — May be harmful if inhaled
- H361 — Suspected of damaging fertility or the unborn child
- H370 — Causes damage to organs (single exposure; organ and route to be specified by supplier — verify classification)
- H372 — Causes damage to organs through prolonged or repeated exposure (inhalation; respiratory system)
- H400 — Very toxic to aquatic life
- H410 — Very toxic to aquatic life with long lasting effects