



SUPREME PETRO
CHEMICALS

IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS ·
SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road,
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SAFETY DATA SHEET (SDS)

Di Octyl Phthalate (DOP) *SDS*

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

CAS 117-81-7 EC 204-211-0 SIGNAL WORD DANGER

GHS07

Harmful / Irritant

GHS08

Health Hazard

GHS09

Environmental Hazard

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

Product Name	Di Octyl Phthalate (DOP)
Product Type	Di(2-ethylhexyl) phthalate — industrial chemical
Chemical Family	Phthalate ester plasticiser
CAS No.	117-81-7
EC No.	204-211-0
Intended Use	Industrial / professional use as plasticiser in PVC, rubber, and polymer processing; also used as a solvent carrier in coatings and adhesives.
Restrictions on Use	Industrial / professional use only. Not for food-contact, toy, cosmetic, or medical-device applications without regulatory confirmation. 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/di-octyl-phthalate-dop
SDS Revision	July 2026
SDS Version	3.1



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SECTION 2 HAZARD IDENTIFICATION

Repr. 1B; Carc. 1B; STOT SE 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 2; Eye Irrit. 2; Skin Irrit. 3

Signal Word

DANGER

GHS Pictograms

GHS07 (Harmful / Irritant) | GHS08 (Health Hazard) | GHS09 (Environmental Hazard)

HAZARD STATEMENTS

- H360 — May damage fertility or the unborn child
- H350 — May cause cancer
- H335 — May cause respiratory irritation
- H373 — May cause damage to organs through prolonged or repeated exposure
- H400 — Very toxic to aquatic life
- H411 — Toxic to aquatic life with long lasting effects
- H320 — Causes eye irritation
- H316 — Causes mild skin irritation

PRECAUTIONARY — PREVENTION

- P201 — Obtain special instructions before use.
- P202 — Do not handle until all safety precautions have been read and understood.
- P260 — Do not breathe vapours or spray.
- 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.
- P303+P361+P353 — IF ON SKIN OR HAIR: Remove / take off immediately all contaminated clothing. Rinse skin with water / shower.
- P304+P340 — IF INHALED: Remove person to fresh air and keep comfortable for breathing.



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- P305+P351+P338 — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P308+P313 — IF exposed or concerned: Get medical advice / attention.
- P331 — Do NOT induce vomiting.
- P312 — Call a POISON CENTER or doctor if you feel unwell.
- P391 — Collect spillage.
- P405 — Store locked up.
- P403+P235 — Store in a well-ventilated place. Keep cool.
- P501 — Dispose of contents / container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	EC NO.	% W/W	GHS CLASSIFICATION
Di(2-ethylhexyl) phthalate (DEHP / DOP)	117-81-7 204-211-0		100	Repr. 1B (H360); Carc. 1B (H350); STOT SE 3 (H335); STOT RE 2 (H373); Aquatic Acute 1 (H400); Aquatic Chronic 2 (H411); Eye Irrit. 2 (H320); Skin Irrit. 3 (H316)

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 breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
Skin Contact	Remove contaminated clothing immediately. Wash affected skin thoroughly with soap and water for at least 15 minutes. Seek medical attention if irritation develops or persists.
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. Do not give anything by mouth to an unconscious person. Seek immediate medical advice / call a POISON CENTER.
Note to Physician	Treat symptomatically based on exposure route and product hazards. Reproductive toxicant and suspected carcinogen — take



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exposure history. No specific antidote known.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical powder, carbon dioxide (CO ₂), foam, water spray / fog. Water jet may be used for large fires but may spread burning liquid.
Unsuitable Media	Do not use a direct high-pressure water jet where it may spread the material.
Specific Hazards	Combustible liquid (flash point ~207°C). On combustion may produce carbon monoxide, carbon dioxide, and irritating or toxic organic fumes including phthalic anhydride vapour.
Protective Equipment	Wear full protective clothing and self-contained breathing apparatus (SCBA). Avoid inhalation of smoke and combustion products.
Special Procedures	Evacuate non-essential personnel. Cool containers exposed to fire with water spray. Prevent contaminated fire-fighting run-off from entering drains and waterways. Collect contaminated water for disposal.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate the spill area. Eliminate ignition sources. Wear appropriate PPE as specified in Section 8 (nitrile/butyl gloves, chemical splash goggles, chemical-resistant clothing). Avoid breathing vapours.
Environmental Precautions	Prevent entry into drains, sewers, soil, surface water, and watercourses. DOP is classified as Aquatic Acute 1 and Aquatic Chronic 2 — release to water must be avoided. Notify authorities if significant release occurs.
Containment / Clean-up	Contain spill with inert absorbent material (sand, vermiculite, dry earth). Collect in labelled, sealed, compatible containers for disposal by an approved waste contractor. Do not wash residue to drains. Wash spill area with water after removal.
Reference to Sections	See Section 8 for PPE details, Section 13 for disposal, and Section 15 for regulatory requirements.



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SECTION 7 HANDLING AND STORAGE

Handling Precautions	Use adequate local exhaust ventilation. Avoid contact with skin, eyes, and clothing. Avoid inhalation of vapours or mist. Keep containers tightly closed when not in use. Ground and bond containers and receiving equipment when transferring bulk quantities to prevent static discharge.
Hygiene	Wash hands thoroughly after handling. Remove and wash contaminated clothing before reuse. Do not eat, drink, or smoke when using this product. Provide eyewash station and safety shower in the work area.
Storage Conditions	Store in original, tightly closed, compatible containers (steel drum, HDPE drum) in a cool, dry, well-ventilated area away from heat sources and direct sunlight. Inspect containers regularly for leakage or damage.
Storage Temperature	Store at ambient temperature (below 40°C). Product is a viscous liquid at room temperature; does not require refrigeration.
Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Concentrated mineral acids. Aluminium chloride (AlCl ₃) at elevated temperatures may cause reaction.
Segregation	Segregate from food, drink, animal feed, oxidising agents, and incompatible chemicals. Do not store near open ignition sources.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	CAS 117-81-7 (DEHP): OSHA PEL = 5 mg/m ³ (TWA); NIOSH REL = 5 mg/m ³ (TWA); ACGIH TLV-TWA = 5 mg/m ³ (as inhalable fraction, A2 – suspected human carcinogen). EU / India / regional OEL: verify from local authority before use. Apply ALARA / good industrial hygiene where no OEL is established.
Engineering Controls	Use closed handling systems or local exhaust ventilation (LEV) to control vapour or aerosol. General dilution ventilation acceptable for ambient temperature handling of this low-vapour-pressure liquid. Provide eyewash and safety shower.
Respiratory Protection	Adequate ventilation normally sufficient for ambient-temperature handling. Where airborne concentrations may exceed OEL, use a NIOSH/EN-approved respirator with organic vapour / P100



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combination cartridge. Use SCBA for confined spaces or emergency response.

Hand / Eye / Skin

Hands: Wear chemical-resistant gloves — nitrile (>0.3 mm), butyl rubber, or neoprene; select based on breakthrough time for DOP. Eyes: Chemical splash goggles (EN 166 / ANSI Z87.1); add face shield for splash risk. Body: Chemical-resistant apron and safety footwear. Wash PPE after use; replace immediately if damaged.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to pale yellow oily liquid
Odour	Slight, characteristic ester odour
Odour Threshold	Not established in reviewed public sources
pH	Not applicable (non-aqueous liquid)
Melting / Freezing Point	–50°C (–58°F) (NTP, 1992)
Boiling Point / Range	384°C (723°F) at 760 mmHg (NTP, 1992)
Flash Point	207°C (405°F) — closed cup (NTP, 1992)
Auto-ignition Temperature	391°C (735°F) (NTP, 1992)
Flammability Limits	Not established for liquid under ambient conditions; fine mist / aerosol may form explosive atmospheres
Vapour Pressure	~1.32 × 10 ^{–5} mmHg at 25°C (negligible at ambient temperature)
Vapour Density (air = 1)	13.45 (calculated from MW 390.56 / 29)
Relative Density	0.98 at 25°C (77°F) (USCG, 1999) — denser than water
Solubility in Water	<0.1 mg/mL at 22°C (72°F) — practically insoluble (NTP, 1992)
Log Pow (Partition Coeff.)	7.60 (ECHA / peer-reviewed)
Evaporation Rate	Very low (high boiling point, low vapour pressure)
Viscosity	22 cSt at 20°C; ~386 cSt at 0°C; ~5 cSt at 100°C (peer-reviewed)
VOC Content	Negligible under ambient conditions; assess per applicable regional VOC regulations

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions. Not explosive, not self-reactive.
Conditions to Avoid	Avoid excessive heat, open flames, and ignition sources. Avoid contamination with water, oxidising agents, or incompatible acids.



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Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Concentrated mineral acids. Aluminium chloride (AlCl_3) at elevated temperatures may promote hydrolysis.
Hazardous Decomposition	Combustion / thermal decomposition may produce carbon monoxide (CO), carbon dioxide (CO_2), phthalic anhydride vapour, and other irritating or toxic organic fumes.
Hazardous Reactions	No hazardous reactions under normal storage and handling conditions.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD_{50} (rat, oral): >30,000 mg/kg (RTECS; low acute oral toxicity). GHS classification: not classified for acute oral toxicity.
Acute Dermal Toxicity	LD_{50} (rabbit, dermal): >10,000 mg/kg. Low acute dermal toxicity.
Acute Inhalation Toxicity	Low vapour pressure limits inhalation risk at ambient temperature. LC_{50} data not established under standard conditions; mist/aerosol may be irritating.
Skin Irritation	Classified Skin Irrit. 3 (H316) — may cause mild skin irritation with prolonged / repeated contact.
Eye Irritation	Classified Eye Irrit. 2 (H320) — causes eye irritation.
Sensitisation	Not classified as a skin or respiratory sensitizer based on available data.
Carcinogenicity	Classified Carc. 1B (H350) under EU CLP — may cause cancer. ACGIH A2 (suspected human carcinogen). IARC Group 2B (possibly carcinogenic to humans) based on animal data. NTP — reasonably anticipated to be a human carcinogen.
Mutagenicity	Not classified as a germ cell mutagen; available in vitro / in vivo mutagenicity data generally negative. Verify with supplier regulatory dossier.
Reproductive Toxicity	Classified Repr. 1B (H360) — may damage fertility or the unborn child. Evidence of testicular and developmental toxicity in animal studies. Avoid exposure especially for pregnant workers and workers of reproductive age.
STOT — Single Exposure	Classified STOT SE 3 (H335) — may cause respiratory irritation.
STOT — Repeated Exposure	Classified STOT RE 2 (H373) — may cause damage to organs through prolonged or repeated exposure (liver and kidneys identified as target organs in animal studies).



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SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	Classified Aquatic Acute 1 (H400) and Aquatic Chronic 2 (H411). Very toxic to aquatic organisms. Acute EC ₅₀ / LC ₅₀ values for fish, daphnia, and algae are available in ECHA substance registration; obtain from supplier or ECHA CHEM portal where required.
Persistence / Degradability	Not readily biodegradable based on standard test data. Moderately persistent in the environment. Hydrolysis occurs under acidic / alkaline conditions.
Bioaccumulation	Log Kow = 7.60 indicates high bioaccumulation potential (BCF > 1000 expected). Subject to bioaccumulation regulatory scrutiny under REACH and equivalent frameworks.
Mobility in Soil	Low water solubility and high log Kow indicate strong adsorption to soil and sediment. Not expected to be highly mobile in soil; will bind to organic matter. Prevent release to soil and groundwater.
Other Adverse Effects	REACH SVHC candidate list substance (reproductive toxicant, endocrine disruptor concerns). Avoid uncontrolled release to the environment. Manage releases and waste under applicable environmental regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents / waste through an authorised hazardous waste contractor in accordance with local regulations. Do not discharge to drains, sewer, or water bodies. Incineration at a licensed facility is the preferred method.
Contaminated Packaging	Empty containers may retain product residues and are hazardous until cleaned or disposed. Handle as hazardous waste. Return to supplier or dispose through an authorised waste contractor. Do not re-use containers unless they have been thoroughly cleaned and inspected.
Indian Regulations	Follow Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016 and applicable State Pollution Control Board (SPCB) requirements. DEHP-containing waste may require Schedule II hazardous waste categorisation; confirm with SPCB before disposal.



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SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	Not regulated as DG (verify)	Not regulated as DG (verify)	Not regulated as DG (verify)
Proper Shipping Name	Not applicable if not regulated	Not applicable if not regulated	Not applicable if not regulated
Class	—	—	—
Packing Group	—	—	—
Marine Pollutant	Verify — likely Yes (Aquatic Acute 1 / Chronic 2)	Verify — likely Yes per IMDG criteria	—

DOP (DEHP) has a high flash point (~207°C) and is generally not classified as a Class 3 flammable liquid under ADR/IMDG/IATA. However, its Aquatic Acute 1 classification may trigger Marine Pollutant designation under IMDG. Aquatic hazard classification must be confirmed against current IMDG amendment before each shipment. Use UN-certified, compatible, leak-proof packaging. Verify transport class and marine pollutant status with carrier and supplier SDS before shipment. Do not ship as 'Not Regulated' until DG status is formally verified.

SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP

DEHP (CAS 117-81-7) is listed on the REACH SVHC Candidate List (reproductive toxicant, endocrine disruptor). Inclusion in Annex XIV (Authorisation List) restricts industrial use in the EU without authorisation for many applications. CLP classification: Repr. 1B (H360); Carc. 1B (H350); STOT RE 2 (H373); Aquatic Acute 1 (H400); Aquatic Chronic 2 (H411); Eye Irrit. 2 (H320); Skin Irrit. 3 (H316); STOT SE 3 (H335). Observe all REACH, CLP, and downstream use restrictions.

OSHA (USA)

Prepared in OSHA HCS / HazCom 2012 aligned 16-section SDS format. DEHP is listed by NTP as reasonably anticipated to be a human carcinogen; ACGIH TLV-TWA 5 mg/m³ (A2 — suspected human carcinogen). CPSC restricts DEHP in children's toys and child-care articles (Consumer Products Safety Improvement Act). Verify TSCA inventory status before US import or distribution.

India

Observe applicable Indian regulations: MSIHC Rules 1989 (Major Accident Hazards), Factories Act 1948, Environment Protection Act 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016, and applicable State



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Pollution Control Board (SPCB) requirements. DEHP is under regulatory scrutiny in India for endocrine-disrupting properties; confirm current BIS / MoEFCC notification status before import or manufacture.

Other Jurisdictions

China: Observe GB/T SDS requirements and REACH-equivalent restrictions. Canada (WHMIS/HPR): Classify and label under WHMIS 2015; DEHP is a toxic substance under CEPA 1999; Canadian sale may require bilingual SDS and label. Australia (AICS): Check AICS inventory status before export / import. Final market placement requires confirmation of inventory status, local OELs, transport class, waste code, and SVHC / authorisation restrictions in each jurisdiction.

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 with all applicable laws and regulations.

FULL TEXT OF H-STATEMENTS

- H316 — Causes mild skin irritation
- H320 — Causes eye irritation
- H335 — May cause respiratory irritation
- H350 — May cause cancer
- H360 — May damage fertility or the unborn child
- H373 — May cause damage to organs through prolonged or repeated exposure
- H400 — Very toxic to aquatic life
- H411 — Toxic to aquatic life with long lasting effects