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

No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
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SAFETY DATA SHEET (SDS)

Toluene *SDS*

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

CAS **108-88-3** EC **203-625-9** SIGNAL WORD **DANGER**

GHS02	GHS07	GHS08	GHS09
Flammable Liquid	Harmful / Irritant	Health Hazard	Environmental Hazard

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

Product Name	Toluene
Product Type	Solvent / industrial chemical
Chemical Family	Aromatic hydrocarbon
CAS No.	108-88-3
EC No.	203-625-9
Intended Use	Industrial / professional use as a solvent in paints, coatings, adhesives, rubber, printing inks, and chemical synthesis.
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/toluene
SDS Revision	July 2026
SDS Version	3.1

SECTION 2 HAZARD IDENTIFICATION

Flam. Liq. 2; Asp. Tox. 1; Skin Irrit. 2; Acute Tox. 4 (inhalation); STOT SE 3; Repr. 2; STOT RE 2; Aquatic Chronic 3

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Signal Word	DANGER
GHS Pictograms	GHS02 (Flammable Liquid) | GHS07 (Harmful / Irritant) | GHS08 (Health Hazard) | GHS09 (Environmental Hazard)

HAZARD STATEMENTS

- H225 — Highly flammable liquid and vapour
- H304 — May be fatal if swallowed and enters airways
- H315 — Causes skin irritation
- H332 — Harmful if inhaled
- H335 — May cause respiratory irritation
- H336 — May cause drowsiness or dizziness
- H361 — Suspected of damaging fertility or the unborn child
- H373 — May cause damage to organs through prolonged or repeated exposure
- H412 — Harmful to aquatic life with long lasting effects

PRECAUTIONARY – PREVENTION

- P233 — Keep container tightly closed.
- P240 — Ground/bond container and receiving equipment.
- P241 — Use explosion-proof electrical/ventilating/lighting equipment.
- P242 — Use only non-sparking tools.
- P243 — Take precautionary measures against static discharge.
- 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.
- P331 — Do NOT induce vomiting.
- P312 — Call a POISON CENTER or doctor if you feel unwell.
- P403+P235 — Store in a well-ventilated place. Keep cool.
- P405 — Store locked up.
- 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
Toluene	108-88-3	203-625-9	~100	Flam. Liq. 2 (H225); Asp. Tox. 1 (H304); Skin Irrit. 2 (H315); Acute Tox. 4 (H332); STOT SE 3 (H335, H336); Repr. 2 (H361); STOT RE 2 (H373); Aquatic Chronic 3 (H412)

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, administer 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. Seek medical attention immediately.
Ingestion	Rinse mouth with water. Do NOT induce vomiting (aspiration hazard — H304). Immediately call a POISON CENTER or doctor. Do not give anything by mouth to an unconscious person.
Note to Physician	Aspiration hazard: do not induce vomiting. May cause CNS depression. Treat symptomatically. Reproductive toxicity (H361) and chronic organ effects (H373) are relevant for prolonged exposures.

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SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical powder, CO_2, foam, or sand. Water spray or mist may be used to cool containers and disperse vapours, but direct water jet may spread burning liquid.
Unsuitable Media	Do not use direct high-pressure water jet — it may spread the burning material.
Specific Hazards	Highly flammable liquid and vapour (H225). Flammable vapours may form explosive mixtures with air; vapours may travel to distant ignition sources and flash back. Containers may rupture or explode when exposed to heat. Combustion produces carbon monoxide, carbon dioxide, and other toxic or irritating fumes.
Protective Equipment	Wear full protective clothing and self-contained breathing apparatus (SCBA). Use grounded/explosion-proof equipment.
Special Procedures	Evacuate non-essential personnel. Prevent contaminated firefighting run-off from entering drains and waterways. Cool containers exposed to flame with water spray. Fight fire from a safe distance.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate area. Eliminate all ignition sources (no smoking, flames, sparks). Wear full PPE as detailed in Section 8. Ensure adequate ventilation. Avoid breathing vapours.
Environmental Precautions	Prevent entry into drains, sewers, soil, and watercourses. Report spills to relevant environmental authority if required by local regulation.
Containment / Clean-up	Contain and absorb spill using dry sand, earth, or other non-combustible absorbent material. Collect in labelled, compatible containers for disposal through an approved waste contractor. Do not use sawdust or other combustible absorbents.
Reference to Sections	See Section 8 for PPE, Section 13 for disposal, and Section 15 for regulatory information.

SECTION 7 HANDLING AND STORAGE

Handling Precautions	Use adequate local exhaust ventilation. Avoid contact with skin, eyes, and clothing. Avoid inhalation of vapours. Use explosion-proof

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	equipment. Bond and ground containers during transfer to prevent static discharge.
Hygiene	Wash hands thoroughly after handling. Remove and launder contaminated clothing before reuse. Do not eat, drink, or smoke when using this product.
Storage Conditions	Store in original, tightly closed, compatible containers in a cool, well-ventilated area away from ignition sources.
Storage Temperature	Ambient temperature (below 25°C preferred); keep away from heat sources.
Incompatible Materials	Strong oxidising agents (e.g. nitric acid, permanganates, peroxides, chlorine), concentrated acids, halogens. See Section 10.
Segregation	Segregate from food, drink, animal feed, and incompatible chemicals. Store away from oxidisers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	Toluene (CAS 108-88-3): OSHA PEL 200 ppm (TWA), 300 ppm ceiling; NIOSH REL 100 ppm (TWA), 150 ppm STEL; ACGIH TLV 20 ppm (TWA). Indian OEL (CPCB/MoEF): verify current notified limits. Use verified local OEL/STEL where established; apply ALARA / good industrial hygiene practice otherwise.
Engineering Controls	Use closed handling systems and local exhaust ventilation (LEV) to control vapour levels below OEL. Use explosion-proof ventilation, electrical, and lighting equipment. Ground and bond containers during transfer.
Respiratory Protection	Where vapour concentration may exceed OEL: use a NIOSH-approved organic vapour cartridge respirator (half-face or full-face). For high concentrations or emergencies, use SCBA or supplied-air respirator.
Hand / Eye / Skin	Gloves: chemical-resistant nitrile, butyl rubber, or neoprene; select thickness and breakthrough time appropriate for the task. Eyes: EN 166 / ANSI Z87.1 chemical splash goggles; add face shield for splash risk. Body: chemical-resistant apron/overalls and antistatic safety footwear. Eyewash and safety shower must be immediately available.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colourless liquid
Odour	Sweet, pungent, benzene-like odour
Odour Threshold	~0.16–1.6 ppm (literature range)
pH	Not applicable (non-aqueous liquid)
Melting / Freezing Point	-95°C (-139°F) [NTP, 1992]
Boiling Point / Range	110.6°C (231.1°F) at 760 mmHg [NTP, 1992]
Flash Point	4°C (39°F) — closed cup
Auto-ignition Temperature	480°C (896°F) [USCG, 1999]
Flammability Limits	LEL 1.1% v/v; UEL 7.1% v/v (in air)
Vapour Pressure	28.4 mmHg at 20°C [NTP, 1992: 10 mmHg at 6.4°C; 20 mmHg at 18.4°C; 40 mmHg at 31.8°C]
Vapour Density (air = 1)	3.14 — heavier than air; vapours will sink and accumulate at low levels [NTP, 1992]
Relative Density	0.867 at 20°C (less dense than water; will float) [USCG, 1999]
Solubility in Water	526 mg/L at 25°C (slightly soluble); <1 mg/mL at 18°C [NTP, 1992]
Log Pow (Partition Coeff.)	2.73 (log $K_{o}w$)
Evaporation Rate	>1 relative to n-butyl acetate (fast-evaporating solvent)
Viscosity	0.560 mPa·s at 25°C; 0.778 mPa·s at 0°C; 1.165 mPa·s at -25°C
VOC Content	~100% (pure aromatic solvent) — verify per applicable regional VOC regulations

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Avoid heat, open flames, sparks, and other ignition sources. Avoid contamination and contact with incompatible materials.
Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Concentrated acids and halogens. Aluminium chloride ($AlCl_3$) under elevated temperature may cause exothermic reactions — not a concern under normal ambient storage or blending.
Hazardous Decomposition	Carbon monoxide (CO), carbon dioxide (CO_2), and other irritating or toxic fumes may be formed on combustion or thermal decomposition.
Hazardous Reactions	No hazardous reactions under normal storage and handling conditions when stored and handled correctly.

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SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Rat LD_{50} = 5,580 mg/kg (Acute Tox. 5 by oral route; not classified under GHS Cat. 1–4 by oral). Aspiration hazard classified (H304) — do not induce vomiting.
Acute Dermal Toxicity	Rat LD_{50} > 2,000 mg/kg; not classified for acute dermal toxicity.
Acute Inhalation Toxicity	Rat LC_{50} = 49 g/m³/4h (vapour). Classified Acute Tox. 4 by inhalation (H332). CNS depressant effects at elevated concentrations.
Skin Irritation	Causes skin irritation (H315) — classified Skin Irrit. 2. Defatting of skin on repeated contact.
Eye Irritation	May cause mild eye irritation. Not classified for serious eye damage.
Sensitisation	No evidence of skin or respiratory sensitisation.
Carcinogenicity	Not classified as a carcinogen under GHS/IARC (IARC Group 3 — not classifiable as to carcinogenicity in humans). Does not contain benzene at a classifiable level in pure toluene grade.
Mutagenicity	Not classified as a mutagen (Ames test negative).
Reproductive Toxicity	Classified Repr. 2 (H361) — suspected of damaging fertility or the unborn child. CNS toxicity in neonates has been reported following high maternal exposure.
Specific Target Organ (Single)	STOT SE 3 (H335, H336) — may cause respiratory irritation and drowsiness/dizziness via CNS depression.
Specific Target Organ (Repeat)	STOT RE 2 (H373) — may cause damage to the central nervous system, liver, and kidneys through prolonged or repeated exposure.
Aspiration Hazard	Classified Asp. Tox. 1 (H304). May be fatal if swallowed and enters airways. Do not induce vomiting.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	Classified Aquatic Chronic 3 (H412). Fish LC_{50} (96h, Pimephales promelas) = 5.8–74 mg/L. Daphnia EC_{50} (48h) = 5.5–68 mg/L. Algae EC_{50} (72h) ≈12.5 mg/L. Acute toxicity to aquatic organisms; may cause long-lasting environmental effects.
Persistence / Degradability	Readily biodegradable under aerobic conditions (BOD/ThOD ratio ≥0.7). However, volatilisation is the primary removal mechanism from water. Not readily biodegradable under anaerobic conditions.
Bioaccumulation	Log $K_{o}w$ = 2.73 — low to moderate bioaccumulation potential (BCF estimated 13–90). Does not meet criteria for bioaccumulative

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	classification.
Mobility in Soil	Moderate mobility in soil (K_{oc} estimated 37–178). May leach to groundwater. Volatilises rapidly from soil and water surfaces.
Other Adverse Effects	Avoid uncontrolled release to the environment. Not classified as an ozone depleting substance. No specific data on endocrine disruption at normal environmental concentrations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents and container through an authorised hazardous waste contractor in compliance with local and national regulations. Do not pour down drains or into the environment.
Contaminated Packaging	Empty containers may retain residues and flammable vapours; handle as hazardous until thoroughly cleaned or disposed of through an approved route.
Indian Regulations	Toluene waste is classified as hazardous waste under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (Ministry of Environment, Forest and Climate Change). Follow applicable CPCB/SPCB requirements for storage, transport, and disposal.

SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	UN 1294	UN 1294	UN 1294
Proper Shipping Name	TOLUENE	TOLUENE	TOLUENE
Class	3	3	3
Packing Group	II	II	II
Marine Pollutant	No	No	No
Tunnel Restriction (ADR)	D/E	N/A	N/A
EmS (IMDG)	N/A	F-E, S-D	N/A

UN-certified drum required for international transport. Containers must be labelled with Class 3 placard, UN 1294, PG II, and product name. Verify current carrier rules and Dangerous Goods Declarations before shipment. Flash point 4°C — subject to Class 3 flammable liquid controls at all temperatures.

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SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP	Toluene is listed on ECHA REACH candidate list for authorisation considerations. Classified and labelled under EU CLP Regulation (EC) No. 1272/2008 in accordance with Section 2. Compliance with REACH Annex II SDS format requirements. Reproductive toxicity listing under REACH SVHC monitoring — verify current status with supplier.
OSHA (USA)	Hazardous substance under OSHA Hazard Communication Standard (HCS) 29 CFR 1910.1200. Prepared in OSHA HCS/HazCom-aligned 16-section SDS format. OSHA PEL 200 ppm TWA (29 CFR 1910.1000, Table Z-2). Listed on TSCA Chemical Substance Inventory — verify SNUR status before US import or distribution.
India	Classified as hazardous under the Manufacture, Storage and Import of Hazardous Chemical (MSIHC) Rules, 1989 (amended). Comply with applicable Factory Act, CPCB/SPCB, Environment Protection Act, and Hazardous Waste Rules. IEC required for import.
Canada WHMIS / HPR	Classify and label under WHMIS 2015 / Hazardous Products Regulations (HPR) using Section 2 classification. Canadian sale may require bilingual SDS/label and ingredient disclosure threshold compliance.
Other Jurisdictions	China: apply GB/T SDS and GHS classification requirements where marketed. Australia: check AICS inventory status before export or import. GCC / Middle East: observe applicable GHS-aligned local requirements.

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

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- H412 — Harmful to aquatic life with long lasting effects