



SUPREME PETRO
CHEMICALS

IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS ·
SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road,
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admin@supremepetrochemicals.com

SAFETY DATA SHEET (SDS)

Formaldehyde *SDS*

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

CAS 50-00-0 EC 200-001-8 SIGNAL WORD DANGER

GHS05 Corrosive	GHS06 Acute Toxicity	GHS07 Harmful / Irritant	GHS08 Health Hazard
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SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product Name	Formaldehyde (Formalin)
Product Type	Industrial chemical – corrosive / toxic aldehyde; typically supplied as 37–50% aqueous solution (formalin)
Chemical Family	Aldehyde
CAS No.	50-00-0
EC No.	200-001-8
Intended Use	Industrial / professional use: disinfectant, preservative, resin manufacture, chemical synthesis, textile treatment, laboratory fixative.
Restrictions on Use	Industrial / professional use only. Confirm suitability for final application before use. Not for food-contact or cosmetic use without regulatory clearance.
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/formaldehyde
SDS Revision	July 2026
SDS Version	3.1



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SECTION 2 HAZARD IDENTIFICATION

Acute Tox. 2 (Inhal.); Acute Tox. 3 (Oral); Acute Tox. 3 (Dermal); Skin Corr. 1; Eye Dam. 1; Skin Sens. 1; Carc. 1B; Muta. 2

Signal Word

DANGER

GHS Pictograms

GHS05 (Corrosive) · GHS06 (Acute Toxicity) · GHS07 (Harmful / Irritant) · GHS08 (Health Hazard)

HAZARD STATEMENTS

- H301 — Toxic if swallowed
- H302 — Harmful if swallowed
- H311 — Toxic in contact with skin
- H314 — Causes severe skin burns and eye damage
- H317 — May cause an allergic skin reaction
- H318 — Causes serious eye damage
- H330 — Fatal if inhaled
- H331 — Toxic if inhaled
- H341 — Suspected of causing genetic defects
- H350 — May cause cancer

PRECAUTIONARY — PREVENTION

- P201 — Obtain special instructions before use.
- 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.



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- 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.
- 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.
- 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.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	EC NO.	% W/W	GHS CLASSIFICATION
Formaldehyde	50-00-200-0	001-8	37-50 (aqueous solution)	Acute Tox. 2 (Inhal.); Acute Tox. 3 (Oral); Acute Tox. 3 (Dermal); Skin Corr. 1; Eye Dam. 1; Skin Sens. 1; Carc. 1B; Muta. 2
Methanol (stabiliser)	67-56-1200-659-6		≤15 (typical)	Flam. Liq. 2; Acute Tox. 3 (Oral/Dermal/Inhal.); STOT SE 1
Water	7732-18-5	231-791-2	Balance	Not classified

Exact methanol content varies by grade and supplier; confirm from Certificate of Analysis. Full text of H-statements listed in Section 16.



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SECTION 4 FIRST AID MEASURES

Inhalation	Immediately remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Keep warm and at rest. Call a POISON CENTER or physician immediately.
Skin Contact	Remove contaminated clothing immediately. Flush skin with large amounts of water for at least 15 minutes. Seek medical attention if irritation, burns, or symptoms persist. Wash clothing before reuse.
Eye Contact	Rinse cautiously with clean water for at least 15–20 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention — risk of serious eye damage.
Ingestion	Rinse mouth with water. Do NOT induce vomiting. If conscious, give water or milk to dilute. Immediately call a POISON CENTER or physician. Do not give anything by mouth to an unconscious person.
Note to Physician	Formaldehyde is a systemic toxin and carcinogen. Treat symptomatically. Consider specific antidote or chelation under specialist guidance. Methanol content may contribute to metabolic acidosis — monitor accordingly.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical powder, CO ₂ , alcohol-resistant foam, water fog/spray. Water spray is effective for cooling containers and diluting spills.
Unsuitable Media	Direct high-pressure water jet — may spread burning liquid or react with hot material.
Specific Hazards	Flammable liquid (37% formalin flash point ~60°C / 140°F). Combustion produces toxic carbon monoxide, carbon dioxide, and formaldehyde vapour. Containers may rupture under heat. Methanol content adds additional flammability risk.
Protective Equipment	Full protective clothing and self-contained breathing apparatus (SCBA). Do not enter fire area without full PPE.
Special Procedures	Evacuate non-essential personnel. Keep containers cool with water spray. Prevent contaminated fire-fighting run-off from entering drains and watercourses. Contain run-off for appropriate disposal.



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SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate and isolate the spill area. Eliminate all ignition sources (no open flames, smoking, sparks). Use full PPE as specified in Section 8. Avoid breathing vapours — use respiratory protection.
Environmental Precautions	Prevent entry into drains, sewers, soil, and surface water/watercourses. Notify relevant environmental authorities if large release cannot be contained.
Containment / Clean-up	Contain spill with sand, earth, or inert absorbent material. Absorb liquid with dry sand/earth/vermiculite. Collect in labelled, compatible, closed containers. Do not use combustible absorbents. Wash spill area with water. Do not allow wash water to enter drains.
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 only in well-ventilated areas or under local exhaust ventilation. Avoid contact with skin, eyes, and clothing. Avoid breathing vapours/mist. Ground containers when transferring to prevent static discharge. Keep away from heat, sparks, and open flame.
Hygiene	Wash hands thoroughly after handling. Do not eat, drink, or smoke when using. Remove contaminated clothing and wash before reuse. Do not carry in pockets.
Storage Conditions	Store in original, tightly closed compatible containers (HDPE, stainless steel, or glass — avoid uncoated carbon steel, aluminium). Inspect containers regularly for leakage or damage.
Storage Temperature	Store at 15–25°C. Do not allow to freeze. Do not store above 30°C; elevated temperatures increase vapour pressure and polymerisation risk.
Incompatible Materials	Strong oxidising agents (nitric acid, permanganates, peroxides, chlorine). Strong acids and alkalis. Reactive with aluminium chloride at elevated temperatures. See Section 10.
Segregation	Segregate from food, drink, animal feed, oxidisers, corrosives, and incompatible chemicals. Store locked up or in a controlled-access area.



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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	Formaldehyde (CAS 50-00-0): OSHA PEL 0.75 ppm TWA / 2 ppm STEL (15 min). NIOSH REL 0.016 ppm TWA / 0.1 ppm ceiling (15 min). ACGIH TLV-C 0.3 ppm (ceiling). EU IOELV 0.3 ppm (0.37 mg/m ³) TWA / 0.6 ppm STEL. India: follow applicable state/national limits (ALARA where local limit not established). Confirm regional OEL from verified local source.
Engineering Controls	Use closed handling systems, local exhaust ventilation (LEV), or fume cupboards. Ensure adequate general ventilation. Use explosion-proof equipment where flammable vapours may occur. Provide emergency eyewash and safety shower in work area.
Respiratory Protection	Where OEL may be exceeded or ventilation is inadequate: use NIOSH-approved full-face respirator with combined organic vapour/acid gas cartridge (OV/AG). For high-concentration or emergency use: full-face SCBA. Fit-test required.
Hand / Eye / Skin	Gloves: chemical-resistant butyl rubber, neoprene, or laminate (nitrile has limited protection vs. formaldehyde — verify breakthrough time with supplier). Eyes/Face: chemical splash goggles (EN 166 / ANSI Z87.1); face shield for splash risk. Body: chemical-resistant apron/coverall and safety footwear. Provide emergency eyewash (15 min flow) and safety shower.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless liquid (aqueous solution / formalin). May become cloudy at low temperatures due to paraformaldehyde precipitation.
Odour	Strong, pungent, irritating aldehyde odour.
Odour Threshold	~0.5–1.0 ppm (varies by individual; below OEL — do not rely on odour for adequate warning)
pH	2.8–4.0 (37% aqueous solution, typical); verify from supplier COA
Melting / Freezing Point	–92°C (–134°F) — anhydrous formaldehyde gas. Aqueous solutions may deposit paraformaldehyde below 10–15°C. [Source correction: source document listed –134°F under Flash Point; re-mapped to this property.]
Boiling Point / Range	–19°C (–3.1°F) at 760 mmHg — anhydrous formaldehyde. Commercial 37% aqueous formalin: ~96°C (205°F) to 101°C (214°F) at 760 mmHg.



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	[Source correction: these values appeared under Vapour Pressure/Vapour Density lines in source; re-mapped here.]
Flash Point	~60°C (140°F) — 37% aqueous formalin (closed cup). Anhydrous formaldehyde is a flammable gas. [Source correction: source listed melting point value (–134°F) under Flash Point; correct flash point sourced from NIOSH/CAMEO — flagged for supplier verification.]
Auto-ignition Temperature	430°C (806°F) (USCG, 1999). [Source correction: this value appeared under Viscosity in source text; re-mapped to this property.]
Flammability Limits	LEL 7%; UEL 73% in air (anhydrous formaldehyde gas). Aqueous solution LEL higher — consult supplier SDS for specific grade.
Vapour Pressure	>1 atm (anhydrous formaldehyde at ambient temperature). Aqueous 37% formalin: ~10 mmHg at –96°C for anhydrous; 1 mmHg (NIOSH) for aqueous grade at ambient. Confirm from supplier COA/SDS.
Vapour Density (air = 1)	1.04 (NIOSH, 2024) — formaldehyde vapour is heavier than air and will accumulate in low-lying areas.
Relative Density	1.08 at 25°C (77°F) for 37% aqueous formalin (NIOSH, 2024) — denser than water. Anhydrous liquid: 0.815 at –20°C (–4°F) (EPA, 1998) — less dense than water.
Solubility in Water	Miscible in all proportions (NIOSH, 2024).
Log Pow (Partition Coeff.)	0.35 (peer-reviewed; low — hydrophilic, low bioaccumulation potential)
Evaporation Rate	Supplier / grade specific; obtain from supplier SDS.
Viscosity	~0.1421 cP at 25°C (aqueous solution, approximate). [Note: this value appeared under Viscosity in source after auto-ignition data — retained as plausible but flag for supplier confirmation.]
VOC Content	Assess per applicable regional VOC regulations; formaldehyde is a listed VOC in most jurisdictions.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions. Aqueous solutions may slowly polymerise to paraformaldehyde (white precipitate) on prolonged storage, especially at low temperatures or high concentrations.
Conditions to Avoid	Heat, open flames, ignition sources, direct sunlight, freezing temperatures (precipitation of paraformaldehyde), and contamination with incompatible materials.



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Incompatible Materials	Strong oxidising agents (nitric acid, permanganates, peroxides, chlorine, halogens). Alkalis and concentrated acids. Aluminium chloride (AlCl_3) at elevated temperature. Strong bases may cause Cannizzaro reaction.
Hazardous Decomposition	Combustion or thermal decomposition produces carbon monoxide (CO), carbon dioxide (CO_2), and formaldehyde vapour — all toxic. May release formic acid vapour.
Hazardous Reactions	No explosive polymerisation under normal storage conditions. Reaction with amines, amides, and phenols to form condensation resins (intended industrial use). Avoid uncontrolled reaction conditions.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Rat LD50: ~100 mg/kg (oral) — classified Acute Tox. 3 (Oral). H301 Toxic if swallowed; H302 Harmful if swallowed applies for dilute grades. Causes GI burns, nausea, vomiting, abdominal pain.
Acute Dermal Toxicity	Rabbit LD50: ~270 mg/kg — classified Acute Tox. 3 (Dermal). H311 Toxic in contact with skin. Concentrated solutions cause chemical burns (Skin Corr. 1, H314).
Acute Inhalation Toxicity	Rat LC50: ~0.59 mg/L/4h (inhalation) — classified Acute Tox. 2 (Inhal.). H330 Fatal if inhaled. H331 Toxic if inhaled. Severe respiratory and mucous membrane irritation even at low concentrations.
Skin Irritation	Causes severe skin burns and corrosion (Skin Corr. 1, H314). May cause allergic skin sensitisation (Skin Sens. 1, H317).
Eye Irritation	Causes serious eye damage (Eye Dam. 1, H318). Concentrated solutions cause irreversible corneal damage. Immediate rinsing is critical.
Sensitisation	Known skin sensitiser (H317). Respiratory sensitisation also reported in occupational studies — may cause occupational asthma with repeated exposure.
Carcinogenicity	IARC Group 1 — carcinogenic to humans (nasopharyngeal cancer; sufficient evidence for leukaemia). GHS Carc. 1B — H350 May cause cancer. OSHA requires cancer hazard communication.
Mutagenicity	GHS Muta. 2 — H341 Suspected of causing genetic defects. In vitro genotoxicity data positive; in vivo data equivocal. Handle with appropriate precautions.



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SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	Fish (acute): LC50 (Pimephales promelas) ~11.4 mg/L/96h. Daphnia (acute): EC50 ~50 mg/L/48h. Algae: EC50 ~15 mg/L/72h. Considered moderately toxic to aquatic organisms. No chronic aquatic classification established in reviewed GHS classifications; supplier/ecotoxicity data should be obtained if registration required.
Persistence / Degradability	Readily biodegradable under aerobic conditions (BOD/COD ratio high). Formaldehyde is rapidly metabolised by microorganisms. Low environmental persistence under normal treatment conditions.
Bioaccumulation	Log Pow 0.35 — low bioaccumulation potential. BCF not a concern at this log Kow.
Mobility in Soil	High water solubility and miscibility indicate high mobility in soil. Rapid biodegradation limits persistence. Prevent release to groundwater.
Other Adverse Effects	Avoid uncontrolled release to the environment. Report significant releases to the relevant environmental authorities as required by local regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents through an authorised hazardous waste contractor in accordance with local, state, and national regulations. Do not pour into drains, water courses, or soil. Formaldehyde waste is classified as hazardous in most jurisdictions.
Contaminated Packaging	Empty containers may retain hazardous residues. Rinse three times with water before disposal. Handle rinsings as product waste. Do not reuse containers for food or drink. Dispose of containers in accordance with local regulations.
Indian Regulations	Follow requirements under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 under the Environment (Protection) Act 1986. Engage authorised waste recycler or disposer. Comply with CPCB / SPCB guidelines for Schedule II / III hazardous waste.



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SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	UN 1198	UN 1198	UN 1198
Proper Shipping Name	FORMALDEHYDE SOLUTION (with ≥25% formaldehyde)	FORMALDEHYDE SOLUTION (with ≥25% formaldehyde)	FORMALDEHYDE SOLUTION (with ≥25% formaldehyde)
Class	3 (Flammable Liquid)	3 (Flammable Liquid)	3 (Flammable Liquid)
Packing Group	III	III	III
Marine Pollutant	—	No (verify with supplier for grade)	—
Tunnel Restriction	D/E (ADR)	—	—
EmS (Sea)	—	F-E, S-D	—

UN 1198 applies to solutions with flash point ≥23°C and ≥25% formaldehyde. For solutions with flash point <23°C, classification may differ. Verify current carrier-specific rules, IMO/IATA editions, and consignee country requirements before each shipment. UN-certified packaging required. Containers must bear Class 3 placard, UN 1198, PG III, and product name.

SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP	Registered under REACH (EC 1907/2006). Classified and labelled under CLP Regulation (EC 1272/2008) per Section 2. Subject to REACH Annex XIV (authorisation) and Annex XVII restrictions — verify current SVHC/restriction status. Listed on Candidate List as SVHC (carcinogenic).
OSHA (USA)	Prepared in OSHA HCS/HazCom 2012-aligned 16-section SDS format. Formaldehyde is subject to OSHA Formaldehyde Standard (29 CFR 1910.1048) — requires air monitoring, medical surveillance, and specific labelling. Listed on SARA 302/304/311/312/313 (TRI reporting). IARC / NTP listed carcinogen.
India	Subject to Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016; Manufacturing, Storage and Import of Hazardous Chemical Rules (MSIHC) 1989; Environment (Protection) Act 1986; Factories Act 1948. IEC required for import. Confirm CPCB/SPCB consent conditions for storage quantities.
Other Jurisdictions	Canada: WHMIS 2015/HPR — classify and label using Section 2 classification; bilingual SDS/label required for Canadian sale. Australia (AICS): verify inventory status before import. China (GB/T):



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use applicable GB SDS and classification requirements where marketed. GCC/Middle East: comply with GHS-aligned local requirements. TSCA (USA): verify inventory status before US distribution.

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

- H301 — Toxic if swallowed
- H302 — Harmful if swallowed
- H311 — Toxic in contact with skin
- H314 — Causes severe skin burns and eye damage
- H317 — May cause an allergic skin reaction
- H318 — Causes serious eye damage
- H330 — Fatal if inhaled
- H331 — Toxic if inhaled
- H341 — Suspected of causing genetic defects
- H350 — May cause cancer