

**SAFETY DATA SHEET (SDS)****Rev 1.0**

Prepared: May 2026

GHS compliant | Rev 1.0 | Prepared: May 2026

GHS02
FlammableGHS05
CorrosiveGHS06
Acute Toxicity**SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY**

Product Name	Morpholine
Product Type	Morpholine - solvent / industrial chemical
Chemical Family	Morpholine
CAS No. (Morpholine)	110-91-8
CAS No. (Other Component)	N/A
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.
Manufacturer / Supplier	Supreme Petro Chemicals
Address	Periyamet, Chennai - 600 003, Tamil Nadu, India
Emergency Contact	Sudarshan - 8197947045; Sanketh - 8608780096
Email	admin@supremepetrochemicals.com
SDS Revision Date	May 2026
SDS Version	1.0
Product Page URL	https://www.supremepetrochemicals.com/products/morpholine

SECTION 2 HAZARD IDENTIFICATION

Flam. Liq. 3; Met. Corr. 1; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1; Eye Dam. 1; Aquatic Chronic 2	
H226	H226: Flammable liquid and vapour
H302	H302: Harmful if swallowed
H312	H312: Harmful in contact with skin
H314	H314: Causes severe skin burns and eye damage
H332	H332: Harmful if inhaled
H290	H290: May be corrosive to metals
H318	H318: Causes serious eye damage
H411	H411: Toxic to aquatic life with long lasting effects

Signal Word	DANGER
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GHS Pictograms	GHS02 (Flammable) GHS05 (Corrosive) GHS06 (Acute Toxicity) GHS07 (Harmful / Irritant)
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Hazard Statements:

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- H411 - Toxic to aquatic life with long lasting effects
- H311 - Toxic in contact with skin
 - H331 - Toxic if inhaled
- 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 Statements (Response):

- 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.
- P331 — Do NOT induce vomiting.
- P312 — Call a POISON CENTER or doctor if you feel unwell.

Precautionary Statements (Storage & Disposal):

- 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 or concentration range	GHS Classification
Morpholine	110-91-8	See ECHA / supplier SDS	100	Flam. Liq. 3; Met. Corr. 1; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1; Eye Dam. 1; Aquatic Chronic 2

Note: Percentages are by volume. Full text of H-statements listed in Section 16.

SECTION 4 FIRST AID MEASURES

Inhalation	Use product-specific first aid based on exposure route: move to fresh air after inhalation, wash skin, rinse eyes for at least 15 minutes, and seek medical advice after ingestion or persistent symptoms.
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Skin Contact	Remove contaminated clothing. Wash affected skin thoroughly with water and soap where appropriate. Seek medical attention if symptoms persist.
Eye Contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical attention.
Ingestion	Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical advice.
Note to Physician	Treat symptomatically based on exposure route and product hazards.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing media appropriate for the product hazard classification. Fire may produce toxic or irritating fumes; firefighters should wear SCBA.
Unsuitable Media	Direct high-pressure water jet where it may spread the material.
Specific Hazards	Use extinguishing media appropriate for the product hazard classification. Fire may produce toxic or irritating fumes; firefighters should wear SCBA.
Fire & Explosion Risk	Flammable vapours may form explosive mixtures with air, travel to ignition sources and flash back. Containers may rupture when heated. Use grounded/explosion-proof equipment.
Protective Equipment for Firefighters	Wear full protective clothing and self-contained breathing apparatus (SCBA).
Special Procedures	Evacuate non-essential personnel. Prevent contaminated run-off from entering drains and waterways.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate area, use PPE from Section 8, prevent environmental release, and collect material in compatible labelled containers.
Environmental Precautions	Prevent entry into drains, sewers, soil and watercourses.
Containment Methods	Isolate area, use PPE from Section 8, prevent environmental release, and collect material in compatible labelled containers.
Clean-up Methods	Collect material into labelled containers for disposal through an approved waste contractor.
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 ventilation, avoid contact and inhalation, and store tightly closed away from incompatible materials.
Hygiene	Wash hands after handling. Remove contaminated clothing before reuse. Do not eat, drink or smoke when using.
Storage Conditions	Use adequate ventilation, avoid contact and inhalation, and store tightly closed away from incompatible materials.
Storage Temperature	Store at ambient temperature unless supplier instructions specify otherwise.
Incompatible Materials	Strong oxidizers and product-specific incompatible substances; see supplier SDS before use.
Packaging	Store in original, tightly closed compatible containers. Inspect containers regularly for leakage or damage.
Segregation	Segregate from food, drink, animal feed and incompatible chemicals.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Component	OEL (8h TWA)	STEL (15 min)	Standard	Notes
Morpholine	Use verified local OEL if established; otherwise ALARA/good industrial hygiene	Use verified local STEL/ceiling if established	OSHA/NIOSH/ACGI H/EU/UK/India	CAS 110-91-8; supplier/regional OEL confirmation required.

Engineering Controls	Use closed handling/local exhaust for dust, mist, vapour or aerosol. Use explosion-proof ventilation and grounding for flammable liquids.
Respiratory Protection	If ventilation is inadequate, use a NIOSH/EN respirator: organic vapour, acid gas, ammonia, or P95/P100 particulate cartridge as applicable. Use SCBA for emergencies.
Hand Protection	Wear compatible chemical-resistant gloves, e.g. nitrile, butyl, neoprene, PVC or laminate; select thickness/breakthrough time for the product and task.
Eye/Face Protection	Wear EN 166/ANSI Z87.1 chemical splash goggles; add face shield for splash, corrosive, dust, molten or pressure-transfer risk.
Body Protection	Wear chemical-resistant clothing/apron and safety footwear; use antistatic PPE where flammable vapours may occur.
Hygiene Measures	Provide eyewash and safety shower where appropriate. Wash after handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	The appearance or features of this compound, including color,
Odour	PEER REVIEWED Characteristic amine
Odour Threshold	Not established in reviewed public source text
pH	Not applicable unless supplied/used as an aqueous solution. For acids, alkalis, salts, surfactants and aqueous grades, verify pH from supplier COA/SDS before release.
Melting/Freezing Point	23.2 °F (NTP, 1992)
Boiling Point / Range	264 °F at 760 mmHg (NTP, 1992)
Flash Point	Liquid Colorless liquid with a weak, ammonia- or fish-like odor. [Note: A solid below 23 degrees F.]; [NIOSH] Liquid COLOURLESS HYGROSCOPIC LIQUID WITH CHARACTERISTIC ODOUR. Colorl
Auto-ignition Temperature	590 °F (USCG, 1999)
Flammability Limits	See PubChem experimental properties.
Vapour Pressure	6.6 mmHg at 68 °F (NTP, 1992) 10.1 [mmHg]
Vapour Density	3 (NTP, 1992) - Heavier than air; will sink (Relative to Air)
Relative Density	1 at 68 °F (USCG, 1999)
Solubility in Water	Soluble (NTP, 1992)
Log Pow (Partition Coeff)	PEER REVIEWED log Kow = -0.86 -0.86 -0.86 Autoignition Temperature The lowest temperature at which the substance will spontaneously ignite in a normal atmosphere without an externa
Evaporation Rate	See supplier SDS for grade-specific value
Viscosity	PEER REVIEWED 2.23 cP at 20 °C Corrosivity The ability of a chemical to damage or destroy other substances when it comes into contact.
VOC Content	Assess per applicable regional VOC regulations
Reactivity	See Section 10 and source SDS for grade-specific reactivity

**SECTION 10 STABILITY AND REACTIVITY**

Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Avoid heat, ignition sources, contamination and incompatible materials.
Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Avoid contact with concentrated acids and halogens. Reactive with aluminium chloride (AlCl ₃) under elevated temperature — not a concern in ambient blending or storage.
Hazardous Decomposition	Carbon oxides and irritating or toxic fumes may be formed in fire.
Hazardous Reactions	No hazardous reactions under normal storage unless noted by product reactivity.
Possibility of Hazardous React.	Will not occur under normal conditions when stored and handled correctly.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Acute Dermal Toxicity	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Acute Inhalation Toxicity	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Skin Irritation	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Eye Irritation	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Sensitisation	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Specific Target Organ (Single)	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Specific Target Organ (Repeat)	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Reproductive Toxicity	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Aspiration Hazard	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Carcinogenicity	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.
Mutagenicity	Endpoint-specific assessment: see Section 2 classification and Section 3 ingredients. Additional numeric endpoint data requires supplier/test confirmation.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity (Acute)	Aquatic hazard is classified in Section 2. Prevent release; obtain LC50/EC50/NOEC values from supplier/ECHA/PubChem where required.
Aquatic Toxicity (Chronic)	Chronic aquatic hazard is classified or indicated in Section 2. Treat as environmentally hazardous unless verified otherwise.
Persistence / Degradability	Use supplier, ECHA or PubChem data where available. If not verified, do not assume ready biodegradability.
Bioaccumulation	Use verified log Kow/BCF data where available; UVCB/petroleum/surfactant materials need supplier formulation data.



Mobility in Soil	Assess from solubility, adsorption potential and product form. Prevent release to soil and groundwater.
Other Adverse Effects	Avoid uncontrolled release to the environment.
Environmental Regulations	Manage releases and waste under applicable local environmental regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents through an authorized waste contractor in accordance with local regulations.
Contaminated Packaging	Empty containers may retain residues; handle as hazardous until cleaned or disposed.
European Waste Code	Assign waste code according to actual process and local regulation.
Indian Regulations	Follow local hazardous waste and pollution control requirements.

SECTION 14 TRANSPORT INFORMATION

Parameter	UN / ADR (Road)	IMDG (Sea)	IATA (Air)	Notes
UN Number	UN 2054	UN 2054	UN 2054	PubChem transport text / DOT ERG source
Proper Shipping Name	MORPHOLI	MORPHOLI	MORPHOLI	
Class	3.1	3.1	3.1	Transport class
Packing Group	Verify	Verify	Verify	
Marine Pollutant	Verify / likely Yes if IMDG criteria met	Verify / likely Yes if IMDG criteria met	—	Aquatic hazard present; confirm marine pollutant status from IMDG/supplier data.
Tunnel Restriction	Verify	—	—	ADR
EmS (Sea)	—	Verify	—	IMDG
Special Provisions	Follow applicable ADR requirements.	Follow applicable IMDG requirements.	Follow applicable IATA requirements.	Verify current carrier rules before shipment

Packaging: approved compatible container appropriate to the product. UN-certified drum required for international transport. Drum must be labelled with Class 3 placard, UN 2054, PG II, and product name.

SECTION 15 REGULATORY INFORMATION

EU / REACH	Observe REACH and CLP requirements where applicable.
EU CLP Regulation	Classified and labelled according to the product-specific GHS/CLP classification listed in Section 2.
EU Directive	Observe applicable workplace chemical, VOC and environmental requirements.
OSHA (USA)	Prepared in OSHA HCS/HazCom aligned 16-section SDS format.
India	Observe applicable Indian MSIHC, workplace, storage, transport, pollution-control and hazardous-waste requirements.
China (GB Standards)	Use applicable GB/T SDS and classification requirements where marketed.
Middle East / GCC	Observe applicable GHS-aligned local requirements.
TSCA (USA)	Verify TSCA inventory/SNUR status before US import or distribution; mixture/UVCB status may require supplier confirmation.



Australia (AICS)	Check inventory status before export or import.
Special Notes	No product-specific special note beyond the classification in Section 2.
Canada WHMIS / HPR	Classify/label under WHMIS 2015/HPR using Section 2 classification; Canadian sale may require bilingual SDS/label and ingredient disclosure.
Regulatory Scope Limitation	Final market placement requires confirmation of inventory status, local OELs, transport class, waste code and restrictions.

SECTION 16 OTHER INFORMATION

Full Text of H-Statements:

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H411 - Toxic to aquatic life with long lasting effects

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 SDS format
Revision Date	22 May 2026
Version	1.0
Replaces Version	N/A - Initial Issue
Key Sources	SPC product page; original SPC SDS template; consolidated SDS audit CSV dated 27 May 2026; UN GHS Rev.11 Annex 4; OSHA HCS Appendix D; EU REACH Annex II/CLP; Canada WHMIS/HPR; PubChem, ECHA, NIOSH/OSHA, CAMEO and public supplier SDS/transport references where available. Accessed May 2026.
Audit Correction Note	Corrected from audit findings. Verification-required items need supplier formulation, test or regulatory data before market-specific release.

H311 - Toxic in contact with skin

DISCLAIMER

The information in this document is based on our present knowledge and is believed to be correct. It is provided in good faith. No warranty, express or implied, is made as to the accuracy or completeness. This SDS is prepared in accordance with UN GHS Rev.11 (2025). The user is responsible for compliance with all applicable laws and regulations. Supreme Petro Chemicals shall not be liable for any loss, injury, or damage resulting from reliance on this information.

H331 - Toxic if inhaled