

SAFETY DATA SHEET

DIMETHYL FORMAMIDE (DMF)

CAS No.: 68-12-2

This Safety Data Sheet is compiled from well-established published chemical, GHS classification and regulatory reference sources for this substance. It is supplied by Suraj Chemicals as the distributor/supplier of record and is not a manufacturer-issued document. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

Product Name	Dimethyl Formamide (DMF)
CAS Number	68-12-2
Recommended Use	Industrial / commercial chemical trading and distribution
Supplier	Suraj Chemicals, No 92, Govindappa Naicken Street, Shiva Complex, Chennai - 600001, India
Emergency Telephone	+91 - 9840284032, 9176135357 / +91 - 44 - 25393652

2. HAZARD(S) IDENTIFICATION

GHS Signal Word	Danger
HAZARD CLASSIFICATION • Flammable liquid - Category 3 • Acute toxicity, dermal - Category 4 • Acute toxicity, inhalation - Category 4 • Eye irritation - Category 2 • Reproductive toxicity - Category 1B	
HAZARD STATEMENTS • H226 - Flammable liquid and vapor • H312 - Harmful in contact with skin • H319 - Causes serious eye irritation • H332 - Harmful if inhaled • H360D - May damage the unborn child	
PRECAUTIONARY STATEMENTS • P201 - Obtain special instructions before use • P210 - Keep away from heat/sparks/open flames/hot surfaces - No smoking • P260 - Do not breathe vapors/mist • P264 - Wash hands thoroughly after handling • P270 - Do not eat, drink or smoke when using this product • P280 - Wear protective gloves/eye protection/face protection • P308+P313 - If exposed or concerned: get medical advice/attention • P305+P351+P338 - If in eyes: rinse cautiously with water for several minutes, remove contact lenses if present • P403+P235 - Store in a well-ventilated place. Keep cool	

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Dimethyl Formamide (DMF)
CAS Number	68-12-2
Physical State	Liquid
Appearance / Odour	Colorless liquid with a faint, fishy/amine-like odor.

4. FIRST-AID MEASURES

Eye Contact	Rinse immediately with plenty of water for at least 15 minutes, holding eyelids open; remove contact lenses if present. Get medical attention.
Skin Contact	Remove contaminated clothing and wash skin thoroughly with soap and water. Get medical attention if irritation persists; DMF is readily absorbed through skin.
Inhalation	Remove to fresh air immediately. If breathing is difficult, give oxygen; if breathing has stopped, give artificial respiration. Get immediate medical attention.
Ingestion	Do not induce vomiting. Rinse mouth with water and give water to drink if conscious. Get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray/fog, dry chemical, carbon dioxide, alcohol-resistant foam.
Unsuitable Extinguishing Media	Do not use a solid/direct water stream, which may spread the fire.
Special Hazards	Flammable liquid and vapor; vapors are heavier than air and may travel to ignition sources and flash back. Combustion produces toxic fumes including carbon monoxide, carbon dioxide, and nitrogen oxides. Closed containers may rupture when heated.

6. ACCIDENTAL RELEASE MEASURES

Measures	Eliminate ignition sources and ventilate the area. Contain spill with inert absorbent material, avoid contact and runoff to drains/waterways, and collect waste in closed, labeled containers for disposal. Wear appropriate PPE, including skin protection, since DMF is readily absorbed dermally.
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7. HANDLING AND STORAGE

Handling Precautions	Handle in a well-ventilated area or fume hood, avoiding all skin contact and inhalation of vapors; avoid alcohol consumption before/during exposure, as DMF can potentiate alcohol intolerance effects. Keep away from heat, sparks, open flame, and oxidizers; use grounding/bonding during transfer.
Storage Conditions	Store in a cool, dry, well-ventilated area in tightly closed containers away from heat, ignition sources, strong oxidizers, and strong bases/acids. Protect from light and moisture for extended storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits / PPE	OSHA PEL/ACGIH TWA 10 ppm (skin notation); many jurisdictions apply lower internal limits given its reproductive toxicity classification. Use chemical splash goggles, DMF-resistant gloves (e.g., butyl rubber, not standard nitrile/latex), and NIOSH-approved organic vapor respirator in poorly ventilated areas.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance / Odour	Colorless liquid with a faint, fishy/amine-like odor.
Boiling Point	153
Melting Point	-61
Flash Point	58 (closed cup)
Density / Specific Gravity	0.948 g/cm3 at 20 C
Water Solubility	Miscible in all proportions
pH Value	Not applicable (neutral, non-ionizing organic solvent)

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions; can hydrolyze slowly in the presence of strong acids/bases and moisture.
Incompatible Materials	Strong oxidizers, strong acids and bases, halogenated compounds (e.g., carbon tetrachloride can react violently), and reactive metals.
Hazardous Decomposition	Thermal decomposition/combustion can produce carbon monoxide, carbon dioxide, nitrogen oxides, and dimethylamine.

11. TOXICOLOGICAL INFORMATION

Summary	Classified as a Category 1B reproductive toxicant (may damage the unborn child) based on animal developmental toxicity data; also harmful by skin contact and inhalation, with hepatotoxic effects reported after significant occupational exposure. Readily absorbed through intact skin, which is a major route of systemic exposure.
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12. ECOLOGICAL INFORMATION

Summary	Readily biodegradable and of low to moderate acute aquatic toxicity; not classified as hazardous to the aquatic environment under standard GHS criteria, though large releases should be prevented from entering waterways.
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13. DISPOSAL CONSIDERATIONS

Disposal Method	Dispose of as hazardous waste (reproductive toxicant) in accordance with local, state, and federal regulations; incineration at a licensed facility with appropriate emission controls is the typical disposal method. Do not discharge to sewers.
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14. TRANSPORT INFORMATION

UN Number	UN 2265
Transport Hazard Class	Class 3 (Flammable liquid)
Packing Group	III

15. REGULATORY INFORMATION

Notes	Classified as a Category 1B reproductive toxicant in the EU (REACH Annex VI) and is a SVHC candidate/authorization-list substance in the EU due to this classification; listed on TSCA, REACH, and other global inventories. Subject to strict occupational exposure controls, biological monitoring (urinary NMF) in some jurisdictions, and reproductive-hazard labeling requirements.
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16. OTHER INFORMATION

Prepared By	Suraj Chemicals, Technical / QA Desk
Date of Issue	29 Sep 2026
Note	This SDS is compiled from well-established published GHS hazard classification data and general chemical reference sources for this substance, in the standard 16-section format. Values are believed accurate but Suraj Chemicals makes no warranty, express or implied, regarding their completeness. Users should evaluate suitability for their own specific use.

(This document is computer generated and therefore does not require any signature.)

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