



MATERIAL SAFETY DATA SHEET

2522 Plantation Center Drive
Matthews, NC 28105
(704) 845 9440
www.ciscochem.com

PRODUCT NAME: Dimethyl Formamide

CHEMICAL NAME: Dimethyl Formamide

SYNONYMS:

CAS NUMBER: 68-12-2

**IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887**

PROPERTIES: ODOR & APPEARANCE: clear, colorless, mobile liquid with mild amine (fishy/ammonia) odor
ODOUR THRESHOLD: 0.046ppm
VAPOUR PRESSURE: 2.6MMHG/0.35PA (20 c)
EVAPORATION RATE (Butyl acetate=1): 0.06
VAPOR DENSITY (air=1): 2.5
BOILING RANGE: 153 c
FREEZING POINT: -61 c
SPECIFY GRAVITY: 0.953 (20/20 c)
WATER SOLUBILITY: complete
- In other Solvents: soluble in alcohols, ethers, ketones, aromatic hydrocarbons; but not halogenated hydrocarbons
VISCOSITY: 0.85 (20 c)
PH: 6.7 – ESSENTAILLY NEUTRAL

HAZARDS: N.N-dimethyl formamide - 100%

FIRE FIGHTING FLASH POINT: 58c/136 F (closed up)
MEASURES: AUTOIGNITION TEMPERATURE: 442 c/828 F
FLAMMABILITY LIMITS: 2.2% - 15.2%
COMBUSTION PRODUCTS: Carbon monoxide, nitrogen oxides, smoke, dimethylamine
FIRE FIGHTING PRECAUTIONS: Foam, dry chemical, water fog, water spray only to cool & dilute, Product floats on water - water jet spreads flames; fire fighters must wear SCBA
STATIC DISCHARGE: No (liquid); vapour may accumulate a static charge - ensure vapor is vented
MECHANICAL IMPACT: Not sensitive
CHEMICAL STABILITY: Stable; will not polymerize
REACTIVE WITH: Strong oxidizing agents, bromine, chlorine, halogenated hydrocarbons, nitrates, CrO3, P2O3, Al(C2H5)3
DECOMPOSITION PRODUCTS: None apart from Hazardous Combustion Products; decomposes above 350 c/660 F

PERSONAL PROTECTION HANDS: butyl rubber, "Responder" "Trelchem HPS", OR "Tychem10 000" gloves
EYES: safety glasses with side shields or chemical goggles
MEASURES: VENTILATION: not required if ventilation is adequate
CLOTHING: impervious (hands ,above) apron, boots, long sleeves if splashing is anticipated

EMERGENCY & FIRST AID PROCEDURES: SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical attention promptly if there is irritation.
INHALATION: Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respirator and seek medical aid promptly.



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INGESTION: Give plenty of water to dilute product. If available, administer activated charcoal slurry in water containing 50g charcoal in 400ml water. Do not induce vomiting. Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomiting material. Seek medical help promptly. **NOTE:** Inadvertent inhalation of vomiting material may seriously damage lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxic product. The stomach should only be emptied under medical supervision, after the inhalation of an airway to protect the lungs.

EXPOSURE TWAEV - 10ppm (skin)
LIMITS: LD50 ORAL - 2800
mg/kg - 4720 (skin)
LC50 Inhalation - 9400 ppm

TOXICOLOGICAL EFFECTS OF ACUTE EXPOSURE

INFORMATION: SKIN CONTACT: irritating

SKIN ABSORPTION: slight; no toxic effects likely by this route

EYE CONTACT: strongly irritating, may damage eyes

INHALATION: vapour may irritate & cause chemical burns in lung – but low vapour pressure greatly reduces risk of inhalation.

INGESTION: irritating; may cause chemical burns in digestive tract; may cause drowsiness or behavior changes

EFFECTS OF CHRONIC EXPOSURE

GENERAL: prolonged exposure may cause skin cracking and dermatitis

SENSITISING: not a sensitiser

CARCINOGENIC: experimental tumorigen; no evidence of carcinogen or tumorigen activity in humans

REPRODUCTIVE EFFECT: fetotoxic at doses often killing mother rodents; no known effect in humans

SYNERGISTIC WITH: not known

LD50: 2800mg/kg (oral, rat), 2900mg/kg & 3700mg/kg (oral/mouse). 5000mg/kg (oral, rabbit); 4700mg/kg (skin, rabbit)

LC50: 9400ppm (inhalation, rat)

ACCIDENTAL LEAK PRECAUTION: dyke to spillage and prevent environmental contamination

RELEASE MEASURES HANDLING SPILL: ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using non-sparking plastic or aluminium shovel & store in closed containers for recycling or disposal

WASTE DISPOSAL: DO NOT FLUSH TO SEWER; may be incinerated in approved facility after mixing with a suitable flammable solvent; incinerator must be equipped with flue gas scrubbing & monitoring

ENVIRONMENTAL INFORMATION PRODUCT HARMFUL TO AQUATIC AT LOW CONCENTRATION; this product cannot accumulate in living tissue; this product is biodegradable in the presence of oxygen.

CARCINOGENIC PROPERTIES & NOTIFICATIONS: NE

TRANSPORT INFORMATION: Product ID Number - UN-2265
Shipping Name - N,N-dimethyl formamide
Classification - Class 3, packing group III
Label - Class 3, Combustible
WHMIS Class - B3; D 2B
HMIS - Health 1, Fire 2, Reactivity - 0



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Material use - solvent for vinal resins, acetylene, butadiene, acid gases, and polyacrylic fibers; catalyst for carbonylation reactions.

HANDLING & STORAGE: Store and use in a cool dry environment, away from sources of ignition, heat, halogens and oxidizing agents. Use with adequate ventilation. Do not cut, drill, weld or grind near this container. This product is absorbed through the skin. Avoid contact with skin and wash work clothes frequently. An eye bath safety shower must be available near the workplace.