

Common Name: **DIMETHYLFORMAMIDE**

Synonyms: DMF; Formyldimethylamine; N,N-Dimethylformamide

CAS No: 68-12-2

Molecular Formula: C₃H₇NO

RTK Substance No: 0759

Description: Colorless to pale yellow liquid with a fishy or *Ammonia*-like odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 2 - Fire 0 - Reactivity DOT#: UN 2265 ERG Guide #: 129 Hazard Class: 3 (Flammable)	COMBUSTIBLE LIQUID Use dry chemical, CO ₂ , water spray or alcohol-resistant foam as extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Nitrogen</i> . Use water spray to keep fire-exposed containers cool.	Dimethylformamide reacts violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); ALKALI METALS (such as LITHIUM, SODIUM and POTASSIUM); and CARBON TETRACHLORIDE and other CHLORINATED HYDROCARBONS in the presence of IRON. Dimethylformamide is not compatible with ALKYL ALUMINUM COMPOUNDS (such as TRIETHYLALUMINUM) and <i>inorganic</i> NITRATES.

SPILL/LEAKS

Isolation Distance:

Spill: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in dry sand, earth, or a similar material and place into sealed containers for disposal.

PHYSICAL PROPERTIES

Odor Threshold:	0.47 ppm to 100 ppm
Flash Point:	136°F (58°C)
LEL:	2.2%
UEL:	15.2%
Auto Ignition Temp:	883°F (473°C)
Vapor Density:	2.5 (air = 1)
Vapor Pressure:	4 mm Hg at 77°F (25°C)
Specific Gravity:	0.95 (water = 1)
Water Solubility:	Soluble
Boiling Point:	307°F (153°C)
Freezing Point:	-78°F (-61°C)
Critical Temp:	653°F (345°C)
Ionization Potential:	9.12 eV
Molecular Weight:	73.09

EXPOSURE LIMITS

OSHA:	10 ppm, 8-hr TWA
NIOSH:	10 ppm, 10-hr TWA
ACGIH:	10 ppm, 8-hr TWA
IDLH:	500 ppm

The Protective Action Criteria values are:

PAC-1 = 2 ppm PAC-2 = 91 ppm PAC-3 = 530 ppm

PROTECTIVE EQUIPMENT

Gloves:	Barrier® (>8-hr breakthrough)
Coveralls:	Tychem® BR, CSM and TK (>8-hr breakthrough)
Respirator:	SCBA

HEALTH EFFECTS

Eyes:	Irritation
Skin:	Irritation
Inhalation:	Nose and throat irritation with coughing and wheezing Headache, dizziness, nausea and vomiting

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.
Quickly remove contaminated clothing and wash contaminated skin with large amounts of soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.