Safety data for dimethylformamide

Glossary of terms on this data sheet.

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers.

General

Synonyms: N,N-dimethylformamide, dimethyl formamide, N-formyldimethylamine, DMF, U-4224, DMFA, NSC 5356
Molecular formula: HCON(CH₃)₂
CAS No: 68-12-2
EC No: 200-679-5
Annex I Index No: 616-001-00-X

Physical data

Appearance: colourless liquid with slight ammonia odour
Melting point: -61 C
Boiling point: 153 C
Vapour density: 2.5
Vapour pressure: 2.6 mm Hg at 20 C
Specific gravity: 0.95
Flash point: 58 C
Explosion limits: 2.2% - 15.2%
Autoignition temperature: 445 C

Stability

Stable. Incompatible with strong oxidizing agents, halogenated hydrocarbons, chloroformates, active halogen compounds, strong acids,
strong reducing agents, rubber, leather.

**Toxicology**

Harmful by inhalation, ingestion or skin contact. May act as a carcinogen. Ingestion or absorption through skin may be fatal. Exposure may result in foetal death. Long-term exposure may result in kidney or liver damage. Irritant.

**Toxicity data**
(The meaning of any abbreviations which appear in this section is given here.)

ORL-RAT LD50 2800 mg kg\(^{-1}\)
IPR-RAT LD50 1400 mg kg\(^{-1}\)
IVN-RAT LD50 2000 mg kg\(^{-1}\)
IPR-RBT LD50 1000 mg kg\(^{-1}\)

**Risk phrases**
(The meaning of any risk phrases which appear in this section is given here.)
R20 R21 R36 R61.

**Transport information**

(The meaning of any UN hazard codes which appear in this section is given here.)
UN No 2265. Packing group III. Hazard class 3.0.

**Personal protection**

Safety glasses. Good ventilation.

**Safety phrases**
(The meaning of any safety phrases which appear in this section is given here.)
S45 S53.

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