

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

N,N-Dimethylformamide

Manufacturer/supplier identification

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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 3)

Acute toxicity, Oral (Category 5)

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Dermal (Category 4)

Skin corrosion/irritation (Category 3)

Serious eye damage/eye irritation (Category 2A)

Reproductive toxicity (Category 1B)

Label elements

Pictogram

Signal word Danger

Hazard statement(s)

H226 Flammable liquid and vapor.

H303 May be harmful if swallowed.

H312 Harmful in contact with skin.

H316 Causes mild skin irritation.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H360 May damage fertility or the unborn child.

Precautionary statement(s)

P203 Obtain, read and follow all safety instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

GHTECH Material Safety Data Sheet

P264 + P265	Wash hands thoroughly after handling. Do not touch eyes.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/ face protection.
P301 + P317	IF SWALLOWED: Get medical help.
P303 + P361 + P364 + P353	IF ON SKIN (or hair):

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

7. Handling and storage**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure controls and personal protection**Appropriate engineering controls**

General industrial hygiene practice.

Personal protective equipment**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and chemical properties

Form: clear liquid

Colour: colorless

Odour: not available

pH value: not available

Melting point: -61°C.

Boiling point: 153°C

Ignition temperature: not available

Flash point: 55°C(closed cup)

Autoignition temperature: not available

Explosion limits

lower: 2.2 %(V)

upper: 16%(V)

Density : 0.94 g/cm³

Bulk density: not available

Solubility in

water (20 °C) : slightly soluble in water

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity**Chemical stability**

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidants

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information**Acute toxicity**

LD50 Oral - Rat - 3,010 mg/kg

LD50 Inhalation - Rat - 4 h 5.85 mg/l

LD50 Dermal - Rabbit - 1,500 mg/kg

Skin corrosion or irritation

no data available

Serious eye damage or eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Reproductive toxicity

no data available

Carcinogenicity

IARC: 2A - Group 2A: Possible Carcinogenic to humans.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information**Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss - 9,000 - 13,000 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 9,600 - 13,100 mg/l- 48 h

Persistence and degradability

Biodegradability aerobic - Exposure time 21 d

Result: 100 % - Readily biodegradable.

Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 56 d at 25 °C - 0.002 mg/l(N,N-dimethylformamide)

Bioconcentration factor (BCF): 0.3 - 1.2

Mobility in soil

no data available

13. Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

ADR/RID

UN-Number: 2265 Class: 3