

S a f e t y D a t a S h e e t

According to Regulation (EC) 1907/2006



1785 N,N-Dimethylformamide

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

1.1 Product identifier

Name:

N,N-Dimethylformamide

Synonym:

DMF, Formic Acid Dimethylamide

REACH Registration Number: 01-2119475605-32-XXXX

1.2 Relevant identified uses of the substance or mixture:

For laboratory utilisation, analysis, research and fine chemistry.

1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: product.safety@panreac.com

1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

2. Identification of dangers

Classification of the substance or the mixture.

Classification Regulation (CE) nº 1272/2008.

Flam. Liq. 3

Repr. 1B

Acute Toxicity Dermal cat. 4

Acute Toxicity Inhalation cat. 4

Eye Irrit. 2

Hazard Pictograms



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
H360D May damage the unborn child.
H332 Harmful if inhaled.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves, protective clothing, eye protection or face protection.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash...thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

Classification (67/548/CEE or 1999/45/CE).

T Toxic

R10
RE20/21
R36
R61

For the full text of the R-phrases mentioned in this section, see section 16.

3. Composition/information on ingredients

Name: N,N-Dimethylformamide
Formula: $(\text{CH}_3)_2\text{NCHO}$ M.= 73,10 CAS [68-12-2]
EC number (EINECS): 200-679-5
EC index number: 616-001-00-X
REACH Registration Number: 01-2119475605-32-XXXX

4. First aid measures

4.1 General indications:

Never provide drink or induce vomiting in the event of loss of consciousness.

4.2 Inhaling:

Take the person out into the fresh air. Loosen clothing to release respiratory channels. In the event sickness persists, seek medical assistance.

4.3 Contact with the skin:

Wash with plenty of water. Remove contaminated clothing.

4.4 Eyes:

Wash with plenty of water (for at least 15 minutes), keeping eyelids open. Seek medical assistance.

4.5 Swallowing:

Avoid vomiting. Wash mouth out immediately. Drink large amounts of water. Seek immediate medical assistance.

5. Firefighting measures

5.1 Suitable extinguishing media:

Carbon dioxide (CO₂). Dry powder. Foam. Atomized water.

5.2 Unsuitable extinguishing media:

No specific data.

5.3 Special hazards arising from the substance or mixture:

Flammable. Keep away from sources of ignition. The fumes are heavier than air, so they may spread at floor level. May form explosive mixtures with the air. In the event of fire, fumes may form: NO_x. Precipitate fumes formed with water.

5.4 Advice for firefighters:

Suitable clothing and footwear. Self-contained breathing equipment.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Do not inhale the fumes. Avoid contact with the skin, eyes or clothing.

6.2 Environmental precautions:

Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

6.3 Methods and material for containment and cleaning up:

Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

7. Handling and storage

7.1 Precautions for safe handling:

Air-sensitive.

7.2 Conditions for safe storage, including any incompatibilities:

Well sealed containers. In well ventilated premises. Away from sources of ignition and heat. Room temperature.

8. Exposure controls/personal protection

8.1 Exposure controls:

Ensure good ventilation and renewal of the air in the premises.

8.2 Control parameters:

VLA-ED: 10 ppm - 30 mg/m³ dermal resorption,

8.3 Respiratory protection:

In the event of fumes forming/aerosols, use suitable respiratory protection. Filter P. Filter A.

8.4 Hand protection:

Use suitable gloves

8.5 Eye/face protection:

Use suitable goggles.

8.6 Individual hygiene measures:

Remove contaminated clothing. Wash hands and face before breaks and when the job is done. Use complete protective equipment.

8.7 Environmental exposure controls:

Fulfill the commitments under local environmental protection legislation.

9. Physical and chemical properties

Appearance: liquid

Colour: Colourless

Granulometry: N/A

Odour: Characteristic.

pH:

N/A

Melting point/freezing point: -61 °C

Initial boiling point and boiling range: 153 °C

Flash point: 57,5 °C

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits: 16 %(V) / 2,2 %(V)

Vapour pressure: 3,77 hPa (20 °C)

Vapour density: N/A

Relative density: (20/4) 0,949

Solubility: in () Easily soluble in water and organic solvents (20 °C)

Partition coefficient: n-octanol/water: - 0,85

Auto-ignition temperature: 410 °C

Decomposition temperature: N/A

Kinematic viscosity: N/A

Dynamic viscosity: 0,86 mPa.s(20 °C)

10. Stability and reactivity

10.1 Conditions to avoid:

High temperatures.

10.2 Incompatible materials:

Strong oxidant agents. Halogens. Halides. Halogenated hydrocarbons. Alkaline metals. Nitrates. Metal oxides. Non-metal oxides. Reducing agents. Aluminium tri-ethyl.

10.3 Hazardous decomposition products:

Nitrous fumes.

10.4 Chemical stability:

Hygroscopic. The gases/fumes can form explosive mixtures with the air.

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat : > 5,85 mg/kg 4h

LD50 skn rat : > 3.160 mg/kg

LD50 inh rat : 3040 ppm

11.2 Dangerous effects for health:

Through contact with the eyes: Can cause irritations Risk of cutaneous absorption.
If swallowed: gastro-intestinal disorders vomiting Causes headaches Teratogenic substance.

12. Environmental information

12.1 Toxicity:

Fish (L. Macrochirus) LC50 7100 mg/l (96h)

Crustaceans (Daphnia magna) EC50 > 100 mg/l (48h)

(P. Subcapitata) EC50 > 1000 mg/l (72h)

The toxicity is not very high.

12.2 Persistence and Degradability :

COD = DOC D 100% ThOD 21 d

Easily biodegradable product.

12.3 Bioaccumulative potential:

Risk 0,3-1,2 (56 d) (C. Carpio)

Non-bioaccumulable product.

12.4 Mobility in soil :

Repartition: log P(oct)= -0,85

12.5 Assessment PBT and MPMB :

Data not available.

12.6 Other adverse effects:

Highly purifiable.

If suitable handling conditions are maintained, no ecological problems are to be anticipated.

13. Disposal considerations

13.1 Waste treatment methods:

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes.Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

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13.2 Contaminated containers:

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them. European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

14. Transport information

Overland (ADR):

Technical name: N,N-DIMETHYL-FORMAMIDE

UN 2265 Class: 3 Packaging group: III (D/E)

By sea (IMDG):

Technical name: N,N-DIMETHYL-FORMAMIDE

UN 2265 Class: 3 Packaging group: III

By air (ICAI-IATA):

Technical name: N,N-Dimethylformamide

UN 2265 Class: 3 Packaging group: III

Packaging instructions: CAO 366 PAX 355

15. Regulatory information

The substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

16. Other information

Other precautionary statements

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

Labelling (65/548/CEE or 1999/45/CE)

R-phrases(s): **R10** Flammable.
RE20/21 Also harmful by inhalation and in contact with skin.
R36 Irritating to eyes.
R61 May cause harm to the unborn child.

S-phrases(s): **S45** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53 Avoid exposure - obtain special instructions before use.

Version and revision date : 6 14.1.2013

Remplaced: 8.5.2012

In respect of the previous review, changes have been made to the following sections: 15

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.