



Safety Data Sheet

According to Regulation (EC) 1907/2006



A841 N-Methylmorpholine

Identification of the substance/preparation and of the company or firm

1.1 Identification of the substance or preparation

Name:

N-Methylmorpholine

1.2 Synonym:

4-Methylmorpholine, NMM

1.3 Use of the substance/preparation:

For laboratory utilisation, analysis, research and fine chemistry.

1.4 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

Emergencies:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

Identification of dangers

Classification of the substance or the mixture.

Classification Regulation (CE) n° 1272/2008.

Flam. Liq. 2

Acute Tox. 4

Acute Tox. 4

Skin Corr. 1B

Hazard Pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H312 Harmful in contact with skin.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/.../ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

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

C Corrosive	R34
F Highly flammable	R21/22
	R11

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

Component Composition/Information

Name: N-Methylmorpholine

Formula: C₅H₁₁NO M.= 101,15 CAS [109-02-4]

EC number (EINECS): 203-640-0

First aid

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. In the event of suffocation, proceed immediately to provide artificial respiration. Seek immediate medical assistance.

4.3 Contact with the skin:

Wash with plenty of water. Remove contaminated clothing. Take the product out with cotton wool soaked in polyethylene-glycol 400.

4.4 Eyes:

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

4.5 Swallowing:

Drink large amounts of water. Drink large amounts of water. Avoid vomiting (there is a risk of perforation). Avoid vomiting (there is a risk of perforation). Seek immediate medical assistance. Seek immediate medical assistance. Do not neutralize. Do not neutralize.

Fire-fighting means

5.1 Suitable fire-extinguishing means:

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

5.2 Fire-fighting means which must NOT be used:

5.3 Special risks:

Combustible. Keep away from sources of ignition. In the event of fire, toxic fumes may form: Prevent the build-up of static. May form explosive mixtures with the air. Do not dispose of chemically polluted water into the soil, into water supplies or down drains. Take the necessary precautions to keep back the water used for subsequent elimination in accordance with D

5.4 Protective equipment:

Suitable clothing and footwear. Self-contained breathing equipment.

Measures to be taken in the event of accidental spillage

6.1 Individual precautions:

Do not inhale the fumes.

6.2 Precautions for care of the environment:

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

6.3 Methods for collection/cleaning:

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.

Handling and storage

7.1 Handling:

Avoid the formation of electrostatic charges.

7.2 Storage:

Well sealed containers. Away from light. In a cool place. Away from sources of ignition and heat.

Staff exposure/protection controls

8.1 Technical protective measures:**8.2 Exposure limit control:****8.3 Respiratory protection:**

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

8.4 Hand protection:

Use suitable gloves

8.5 Eye protection:

Use suitable goggles.

8.6 Individual hygiene measures:

Remove contaminated clothing. Use suitable work clothing. Wash hands and face before breaks and when the job is done. Do not inhale the substance.

8.7 Environmental exposure controls:

Fulfill the commitments under local environmental protection legislation.

Physical and chemical properties

Appearance: liquid

Colour: Colourless

Granulometry:

Odour: with characteristic ammonia odor

pH:

Melting point/freezing point: -66 °C

Initial boiling point and boiling range: 112 - 114 °C
Flash point: 12 °C
Flammability (solid, gas):
Upper/lower flammability or explosive limits: 10,6 %(V) / 2 %(V)
Vapour pressure: 20 hPa (20 °C)
Vapour density:
Relative density: (20/4) 0,917
Solubility: Miscible with water, alcohol and ether
Partition coefficient: n-octanol/water:
Auto-ignition temperature: 190 °C
Decomposition temperature:
Viscosity:

Stability and reactivity

10.1 Conditions which should be avoided:

10.2 Matter which should be avoided:

Strong oxidant agents. Nitrites. Nitrous acid. Aluminium. Metals.

10.3 Hazardous decomposition products:

10.4 Complementary information:

Hygroscopic.

Toxicological information

- **Acute toxicity:**

LD50 oral rat : 1.960 mg/kg

LD50 skn rbt : 1.350 mg/kg

- **Dangerous effects for health:**

If fumes inhaled: Irritations to the mucosae coughing breathing difficulties Can cause oedemas in the respiratory tract Upon contact with the skin: burns Risk of cutaneous absorption. Through contact with the eyes: burns Systemic effects: hepatic problems kidney problems Other dangerous characteristics are not discarded. Take the usual precautions for handling chemical products.

Environmental information

12.1 Mobility:

12.2 Ecotoxicity:

12.1.1 - EC50 test (mg/l):

Fish (Leuciscus Idus) 320-460 mg/l/96h

Classification:

Extr. toxic

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

12.2.2 - Receptor medium:

Risk for the water environment

Medium

Risk for the land environment

Medium

12.2.3 - Observations:

12.3 Degradability:

12.3.1 - Test:

12.3.2 - Biotic degradation classification:

BOD5/COD

Biodegradability

12.3.3 - Abiotic degradation depending on pH:

12.3.4 - Observations:

Data not available.

12.4 Accumulation:

12.4.1 - Test:

12.4.2 - Bioaccumulation:

Risk

12.4.3 - Observations:

Data not available.

12.5 Other possible effects on the environment:

Do not allow it to enter soils or water channels.

Considerations regarding elimination

13.1 Substance or preparation:

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.

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.

Information concerning transport

Overland (ADR):

Technical name: 4-METHYLMORPHOLINE (N-METHYLMORPHOLINE)

UN 2535 Class: 3 8 Packaging group: II (D/E)

By sea (IMDG):

Technical name: 4-METHYLMORPHOLINE (N-METHYLMORPHOLINE)

UN 2535 Class: 3 8 Packaging group: II

By air (ICAI-IATA):

Technical name: 4-Methylmorpholine

UN 2535 Class: 3 8 Packaging group: II

Packaging instructions: CAO 307 PAX 305

Regulatory information

Other information

Other precautionary statements

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.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

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

P321 Specific treatment (see on this label).

P322 Specific measures (see on this label).

P330 Rinse mouth.

P338 Remove contact lenses, if present and easy to do. Continue rinsing.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use for extinction.

P403+P235 Store in a well-ventilated place. Keep cool.

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):	R34 Causes burns. R21/22 Harmful in contact with skin and if swallowed. R11 Highly flammable.
S-phrases(s):	S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S23c Do not breathe vapour. S16 Keep away from sources of ignition - No smoking. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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.

In respect of the previous review, changes have been made to the following sections: 2, 3, 15

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