

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

1-Methyl-4-nitroso-piperazine

1.1. Catalog No.:

687318

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
- skull and crossbones
- Acute Tox. 3 H301 Toxic if swallowed.
- health hazard
- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Muta. 2 H341 Suspected of causing genetic defects.
- Carc. 2 H351 Suspected of causing cancer.
- Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2. Label elements

2.2.1. Pictogram



2.2.2.

- 2.2 Label elements
 - Labelling according to Regulation (EC) No 1272/2008
- The substance is classified and labelled according to the CLP regulation.
- Hazard pictograms
- GHS06 GHS08
- Signal word Danger
 - Hazard statements
- H301 Toxic if swallowed.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
- Precautionary statements
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- 2.3 Other hazards
 - Results of PBT and vPvB assessment
 - PBT: Not applicable.
 - vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances
 - CAS No. Description
- 16339-07-4 1-methyl-4-nitrosopiperazine
- Identification number(s) None
 - EC number: 240-409-3
 - RTECS: TM1780000

3.1.1. Formula

C₅H₁₁N₃O

3.1.2. Molecular Weight (g/mol)

129.16

3.1.3. CAS-No.

16339-07-4

4. FIRST AID MEASURES

- 4.1 Description of first aid measures
- General information:
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation:
Supply fresh air and call a doctor.
In case of unconsciousness place patient in recovery position for transport.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing:
Rinse mouth. Do not induce vomiting.
Call for a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5. FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
- 5.3 Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.
- 6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling
Ensure good ventilation/extraction at the workplace.
Store in cool, dry place in tightly closed receptacles.
- Information about fire - and explosion protection: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
Requirements to be met by storerooms and receptacles:
Please refer to the manufacturers certificate for specific storage and transport temperature conditions.
Store only in the original receptacle unless other advice is given on the CoA.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: None.
- 7.3 Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace: Not required.
- Additional information: Lists used were valid at the time of SDS preparation.
- 8.2 Exposure controls
- Appropriate engineering controls No further data; see item 7.
- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
- Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
- Hand protection
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374
- Protective gloves
Material of gloves Butyl rubber, BR
- Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye/face protection Safety glasses

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties
- General Information
- Physical state Fluid
- Colour: Light yellow
- Odour: Odourless
- Odour threshold: Not determined.
- Melting point/freezing point: Not determined.
- Boiling point or initial boiling point and boiling range Not determined.
- Flammability Not determined.
- Lower and upper explosion limit

- Lower: Not determined.
- Upper: Not determined.
- Flash point: Not applicable.
- Auto-ignition temperature: Not determined.
- Decomposition temperature: Not determined.
- pH Not determined.
- Viscosity:
- Kinematic viscosity Not determined.
- Dynamic: Not determined.
- Solubility
- water: Not determined.
- Partition coefficient n-octanol/water (log value) 0.2 logP
- Vapour pressure: Not determined.
- Density and/or relative density
- Density: Not determined.
- Relative density Not determined.
- Vapour density Not determined.
- 9.2 Other information
- Appearance:
- Form: Oily
- Important information on protection of health and environment, and on safety.
- Ignition temperature: Not determined
- Explosive properties: Not determined.
- Change in condition
- Evaporation rate Not determined.
- Information with regard to physical hazard classes
- Explosives Not applicable
- Flammable gases Not applicable
- Aerosols Not applicable
- Oxidising gases Not applicable
- Gases under pressure Not applicable
- Flammable liquids Not applicable
- Flammable solids Not applicable
- Self-reactive substances and mixtures Not applicable
- Pyrophoric liquids Not applicable
- Pyrophoric solids Not applicable
- Self-heating substances and mixtures Not applicable
- Substances and mixtures, which emit flammable gases in contact with water Not applicable
- Oxidising liquids Not applicable
- Oxidising solids Not applicable
- Organic peroxides Not applicable
- Corrosive to metals Not applicable
- Desensitised explosives Not applicable

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
Stable under normal conditions.
No further relevant information available.
- 10.2 Chemical stability Stable under normal conditions.
Thermal decomposition / conditions to be avoided:
Formation of toxic gases is possible during heating or in case of fire.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid Heat.
- 10.5 Incompatible materials: Strong oxidizing agents.
- 10.6 Hazardous decomposition products:
Formation of toxic gases is possible during heating or in case of fire.

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- Acute toxicity Toxic if swallowed.
- LD/LC50 values relevant for classification:
Oral LD50 100 mg/kg (rat)
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause an allergic skin reaction.
- Germ cell mutagenicity Suspected of causing genetic defects.
- Carcinogenicity Suspected of causing cancer.
- Additional toxicological information:
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Muta. 2, Carc. 2
- 11.2 Information on other hazards
- Endocrine disrupting properties Substance is not listed

12. ECOLOGICAL INFORMATION

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Endocrine disrupting properties
- The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects
- Additional ecological information:
- General notes:
- Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
- Do not allow product to reach ground water, water course or sewage system.
- Danger to drinking water if even small quantities leak into the ground.

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods
- Recommendation
- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
- Recommendation: Dispose of in accordance with national regulations.

14. TRANSPORT INFORMATION

- 14.1 UN number or ID number
- ADR, IMDG, IATA UN2810

- ADR 2810 TOXIC LIQUID, ORGANIC, N.O.S. (1-methyl-4-nitrosopiperazine)
- IMDG, IATA TOXIC LIQUID, ORGANIC, N.O.S. (1-methyl-4-nitrosopiperazine)
- 14.3 Transport hazard class(es)
- ADR, IMDG, IATA
- Class 6.1 Toxic substances.
- Label 6.1
- 14.4 Packing group
- ADR, IMDG, IATA III
- 14.5 Environmental hazards: Not applicable.
- 14.6 Special precautions for user Warning: Toxic substances.
- Hazard identification number (Kemler code): 60
- EMS Number: F-A,S-A
- Stowage Category A
- Stowage Code SW2 Clear of living quarters.
- 14.7 Maritime transport in bulk according to IMO instruments Not applicable.
- Transport/Additional information:
- ADR
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
- Maximum net quantity per inner packaging: 30 ml
- Maximum net quantity per outer packaging: 1000 ml
- Transport category 2
- Tunnel restriction code E
- UN "Model Regulation": UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (1-METHYL-4-NITROSOPIPERAZINE), 6.1, III

15. REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category H2 ACUTE TOXIC
- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!