

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 05 Jun 2023

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

D8-N-Nitrosomorpholine

### 1.1. Catalog No.:

678016

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 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  
Regulation (EC) No 1272/2008  
Acute toxicity - Oral Category 3 - (H301)  
Germ cell mutagenicity Category 2 - (H341)  
Carcinogenicity Category 2 - (H351)

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2. Label elements  
Signal word Danger  
Hazard statements  
H301 - Toxic if swallowed

H341 - Suspected of causing genetic defects

H351 - Suspected of causing cancer

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P264 - Wash face, hands and any exposed skin thoroughly after handling

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

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

This product does not contain any known or suspected endocrine disruptors.

Chemical name: N-Nitrosomorpholine-d8

EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation:

-

EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances: -

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name: D8-N-Nitrosomorpholine 1219805-76-1

Weight-%: 100

REACH registration number: -

EC No (EU Index No): 802-335-5

Classification according to Regulation (EC) No. 1272/2008 [CLP]: Acute Tox. 3 (H301) Muta. 2 (H341) Carc. 2 (H351)

Specific concentration limit (SCL):

M-Factor

M-Factor (long-term)

Acute Toxicity Estimate

No information available

Additional information

This product contains a stable isotope.

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

#### 3.1.1. Formula

C<sub>4</sub>D<sub>8</sub>N<sub>2</sub>O<sub>2</sub>

#### 3.1.2. Molecular Weight (g/mol)

124.17

### 3.1.3. CAS-No.

1219805-76-1

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

### 4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

### 5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

No information available.

### 5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

### 6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

General hygiene considerations Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. 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.

### 7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC)

No information available.

### 8.2. Exposure controls

#### Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective butyl rubber gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state Solid

Appearance Crystalline

Colour light yellow  
Odour No information available.  
Odour threshold No information available  
Property Values Remarks o Method  
Melting point / freezing point No data available None known  
Initial boiling point and boiling range No data available None known  
Flammability No data available None known  
Flammability Limit in Air None known  
Upper flammability or explosive limits  
No data available  
Lower flammability or explosive limits  
No data available  
Flash point No data available None known  
Autoignition temperature No data available None known  
Decomposition temperature None known  
pH No data available None known  
pH (as aqueous solution) No data available No information available  
Kinematic viscosity No data available None known  
Dynamic viscosity No data available None known  
Water solubility No data available None known  
Solubility(ies) slightly soluble, Chloroform, DMSO, Methanol  
Partition coefficient No data available None known  
Vapour pressure No data available None known  
Relative density No data available None known  
Bulk density No data available  
Liquid Density No data available  
Relative vapour density No data available None known  
Particle characteristics  
Particle Size No information available  
Particle Size Distribution No information available  
9.2. Other information  
Molecular weight 124.17  
Molecular formula C<sub>4</sub>D<sub>8</sub>N<sub>2</sub>O<sub>2</sub>  
9.2.1. Information with regards to physical hazard classes  
Not applicable  
9.2.2. Other safety characteristics  
No information available

## 10. STABILITY AND REACTIVITY

10.1. Reactivity  
Reactivity No information available.  
10.2. Chemical stability  
Stability Stable under normal conditions.  
Explosion data  
Sensitivity to mechanical impact None.  
Sensitivity to static discharge None.  
10.3. Possibility of hazardous reactions  
Possibility of hazardous reactions None under normal processing.  
10.4. Conditions to avoid  
Conditions to avoid None known based on information supplied.  
10.5. Incompatible materials  
Incompatible materials None known based on information supplied.  
Hazardous decomposition products None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. Suspected of causing genetic defects.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

## 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

## 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

## 14. TRANSPORT INFORMATION

### IATA

14.1 UN number or ID number UN2811  
14.2 UN proper shipping name Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8)  
14.3 Transport hazard class(es) 6.1  
14.4 Packing group III  
Description UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III  
14.5 Environmental hazards Not applicable  
14.6 Special precautions for user  
Special Provisions A3, A5  
ERG Code 6L

### IMDG

14.1 UN number or ID number UN2811  
14.2 UN proper shipping name Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8)  
14.3 Transport hazard class(es) 6.1  
14.4 Packing group III  
Description UN2811, Toxic solid, organic, n.o.s., 6.1, III  
14.5 Marine pollutant NP  
14.6 Special precautions for user  
Special Provisions 223, 274  
EmS-No F-A, S-A No information available  
14.7 Maritime transport in bulk  
according to IMO instruments  
No information available

### RID

14.1 UN number or ID number UN2811  
14.2 UN proper shipping name Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8)  
14.3 Transport hazard class(es) 6.1  
14.4 Packing group III  
Description UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III  
14.5 Environmental hazards Not applicable  
14.6 Special precautions for user  
Special Provisions 274, 614  
Classification code T2

### ADR

14.1 UN number or ID number UN2811  
14.2 UN proper shipping name Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8)  
14.3 Transport hazard class(es) 6.1  
14.4 Packing group III  
Description UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III, (E)  
14.5 Environmental hazards Not applicable  
14.6 Special precautions for user  
Special Provisions 274, 614  
Classification code T2  
Tunnel restriction code (E)

## 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Water hazard class (WGK) obviously hazardous to water (WGK 2)  
Poland SDS created according to the following Polish regulation: Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on

waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

This

product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Complies under research and development exemption or is regulated by a different government agency.

DSL/NDL Contact supplier for inventory compliance status

EINECS/ELINCS Contact supplier for inventory compliance status

ENCS Contact supplier for inventory compliance status

IECSC Contact supplier for inventory compliance status

KECL Contact supplier for inventory compliance status

PICCS Contact supplier for inventory compliance status

AIIC Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment is not required for this substance

## 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!