

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 05-Nov-2024 Revision Number 2

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) TRC-N529986-10MG

Product Name N-Nitrosomorpholine-d8

Form Not applicable

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II

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

CAS No. 1219805-76-1

Chemical name N-Nitrosomorpholine-d8

Pure substance/mixture Substance

Formula C4D8N2O2

Molecular weight 124.17

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Laboratory use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

### Supplier

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM
:+44 (0) 20 8943 7000
Fax :+44 (0) 20 8943 2767

eMail: gb@lgcstandards.com

Web: www.lgcstandards.com

For further information, please contact

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## TRC-N529986-10MG - N-Nitrosomorpholine-d8

E-mail address sds-request@lgcstandards.com

1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident

Spill, Leak, Fire Exposure, or Accident

Call CHEMTREC:

USA & Canada 1-800-424-9300 Rest of the world +1 703-741-3877

Emergency Telephone - §45 - (EC)1272/2008		
Europe	112	
Austria	No information available	
Bulgaria		
Croatia		
Cyprus		
Czech Republic		
Denmark		
France		
Hungary		
Ireland		
Italy		
Lithuania		
Luxembourg		
Netherlands		
Norway		
Portugal		
Romania		
Slovakia		
Slovenia		
Spain		
Sweden		
Switzerland		

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

Classification according to

Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity - Oral	Category 3 - (H301)
Germ cell mutagenicity	Category 2 - (H341)

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Carcinogenicity	Category 1B - (H350)
Specific target organ toxicity — repeated exposure	Category 1 - (H372)

#### 2.2. Label elements

Contains N-Nitrosomorpholine-d8



Signal word Danger

## Hazard statements

H301 - Toxic if swallowed

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H372 - Causes damage to organs through prolonged or repeated exposure

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

N-Nitrosomorpholine-d8

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

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.

Endocrine Disruptor Information

Chemical name

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

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

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

Substances

## **SECTION 3: Composition/information on ingredients**

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#### 3.1 Substances

Chemical name	Weight-%	REACH registration number	`	Classification according to Regulation (EC) No. 1272/2008 [CLP]		M-Factor	M-Factor (long-term)
N-Nitrosomorpholii e-d8 1219805-76-1	100	-	802-335-5		Carc. 1B :: C>=0.001%		

#### Full text of H- and EUH-phrases: see section 16

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 >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

### SECTION 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.

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

**Note to doctors**Treat symptomatically.

## **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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.

## SECTION 6: Accidental release measures

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

Personal precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate

personnel to safe areas.

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

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**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.

## **SECTION 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. Ensure adequate ventilation.

**General hygiene considerations** 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. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Please refer to the manufacturer's certificate for specific storage and transport temperature

conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach

of children. Store locked up.

7.3. Specific end use(s)

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

## SECTION 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

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**Derived No Effect Level (DNEL)** Predicted No Effect Concentration

(PNEC)

No information available. No information available.

8.2. Exposure controls

Personal protective equipment

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

Hand protection 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. Wear

suitable gloves.

Wear suitable protective clothing. Skin and body protection

No protective equipment is needed under normal use conditions. If exposure limits are Respiratory protection

exceeded or irritation is experienced, ventilation and evacuation may be required.

Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this **General hygiene considerations** 

product. Wash hands before breaks and after work. Wear suitable gloves and eye/face

protection. Wash hands before breaks and immediately after handling the product.

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

## SECTION 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 • Method

Melting point / freezing point No data available None known Initial boiling point and boiling rangeNo data available None known **Flammability** No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

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limits

Lower flammability or explosive No data available

limits

Flash pointNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNone known

pH No data available None known

pH (as aqueous solution)No data availableNo information availableKinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone knownWater solubilityNo data availableNone known

Solubility(ies) slightly soluble, Chloroform, DMSO,

Methanol

Partition coefficientNo data availableNone knownVapour pressureNo data availableNone knownRelative densityNo data availableNone 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 C4D8N2O2

9.2.1. Information with regards to physical hazard classes Not applicable

9.2.2. Other safety characteristics No information available

## SECTION 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.

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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.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 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.

**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** 

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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. May cause cancer.

Reproductive toxicity No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure**Causes damage to organs through prolonged or repeated exposure.

**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.

## **SECTION 12: Ecological information**

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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.

## **SECTION 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.

## **SECTION 14: Transport information**

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**Special Provisions** 

Classification code

## SAFETY DATA SHEET

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### TRC-N529986-10MG - N-Nitrosomorpholine-d8

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 Ш Description UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III 14.5 Environmental hazards 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) 14.4 Packing group Description UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III NP 14.5 Marine pollutant No **Environmental hazards** 14.6 Special precautions for user **Special Provisions** 223, 274 F-A, S-A No information available EmS-No. No information available 14.7 Maritime transport in bulk according to IMO instruments 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 UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III Description 14.5 Environmental hazards No 14.6 Special precautions for user 274, 614 **Special Provisions** 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) 14.4 Packing group Ш Description UN2811, Toxic solid, organic, n.o.s. (N-Nitrosomorpholine-d8), 6.1, III, (E) 14.5 Environmental hazards Νo 14.6 Special precautions for user

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274, 614

T2



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Tunnel restriction code (E)

## **SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Germany

Water hazard class (WGK) strongly hazardous to water (WGK 3)

### **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** 

LGC has not confirmed that the chemical substances in this product are on the TSCA Inventory, and LGC is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDCA, FIFRA) or in research and development activities in accordance with the TSCA Inventory R&D exemption provided

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at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the

requirements that apply to its use of this product.

DSL/NDSL
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

#### Legend:

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

DSL/NDSL - 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

AICS - Australian Inventory of Chemical Substances

#### 15.2. Chemical safety assessment

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

#### SECTION 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under section 3

H301 - Toxic if swallowed

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H372 - Causes damage to organs through prolonged or repeated exposure

#### Legend

SVHC: Substances of Very High Concern for Authorisation:

#### Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value Sk\* Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method

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Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

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The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

**End of Safety Data Sheet** 

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