

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 6.7

Revision Date 16.02.2023

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

### 1.1 Product identifiers

|                |   |                                                                                                                                                                                                                                               |
|----------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name   | : | 1,1',1"-Nitrilotri-2-propanol for synthesis                                                                                                                                                                                                   |
| Product Number | : | 8.08236                                                                                                                                                                                                                                       |
| Catalogue No.  | : | 808236                                                                                                                                                                                                                                        |
| Brand          | : | Millipore                                                                                                                                                                                                                                     |
| Index-No.      | : | 603-097-00-3                                                                                                                                                                                                                                  |
| REACH No.      | : | A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline. |
| CAS-No.        | : | 122-20-3                                                                                                                                                                                                                                      |

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

Identified uses : Chemical for synthesis

### 1.3 Details of the supplier of the safety data sheet

Company : Merck KGaA  
Frankfurter Str. 250  
D-64271 DARMSTADT

Telephone : +49 (0)6151 72-0  
Fax : +49 6151 727780  
E-mail address : TechnicalService@merckgroup.com

### 1.4 Emergency telephone

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))  
+(353)-19014670 (CHEMTREC Ireland)  
001-803-017-9114 (CHEMTREC India)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Eye irritation (Category 2), H319


Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.


### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008



|                                |                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Pictogram                      |                                                  |
| Signal Word                    | Warning                                                                                                                          |
| Hazard statement(s)            |                                                                                                                                  |
| H319                           | Causes serious eye irritation.                                                                                                   |
| H412                           | Harmful to aquatic life with long lasting effects.                                                                               |
| Precautionary statement(s)     |                                                                                                                                  |
| P264                           | Wash skin thoroughly after handling.                                                                                             |
| P273                           | Avoid release to the environment.                                                                                                |
| P280                           | Wear eye protection/ face protection.                                                                                            |
| P305 + P351 + P338             | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337 + P313                    | If eye irritation persists: Get medical advice/ attention.                                                                       |
| P501                           | Dispose of contents/ container to an approved waste disposal plant.                                                              |
| Supplemental Hazard Statements | none                                                                                                                             |

### Reduced Labeling (<= 125 ml)

|                                |                                                                                   |
|--------------------------------|-----------------------------------------------------------------------------------|
| Pictogram                      |  |
| Signal Word                    | Warning                                                                           |
| Hazard statement(s)            |                                                                                   |
| H412                           | Harmful to aquatic life with long lasting effects.                                |
| Precautionary statement(s)     | none                                                                              |
| Supplemental Hazard Statements | none                                                                              |

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|           |                                                  |
|-----------|--------------------------------------------------|
| Formula   | : C <sub>9</sub> H <sub>21</sub> NO <sub>3</sub> |
| CAS-No.   | : 122-20-3                                       |
| EC-No.    | : 204-528-4                                      |
| Index-No. | : 603-097-00-3                                   |

| Component                             | Classification                              | Concentration |
|---------------------------------------|---------------------------------------------|---------------|
| <b>1,1',1''-nitriлотripropan-2-ol</b> |                                             |               |
| CAS-No.                               | 122-20-3                                    | <= 100 %      |
| EC-No.                                | 204-528-4                                   |               |
| Index-No.                             | 603-097-00-3                                |               |
|                                       | Eye Irrit. 2; Aquatic Chronic 3; H319, H412 |               |



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## **SECTION 4: First aid measures**

### **4.1 Description of first-aid measures**

#### **General advice**

Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

After inhalation: fresh air.

#### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### **In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### **If swallowed**

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

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

Combustible.

Fire may cause evolution of:  
nitrogen oxides

Development of hazardous combustion gases or vapours possible in the event of fire.

### **5.3 Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus.

### **5.4 Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.



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## **SECTION 6: Accidental release measures**

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **6.4 Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

For precautions see section 2.2.

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

#### **Storage conditions**

Tightly closed. Dry.

Recommended storage temperature see product label.

#### **Storage class**

Storage class (TRGS 510): 11: Combustible Solids

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Ingredients with workplace control parameters**

### **8.2 Exposure controls**

#### **Personal protective equipment**

##### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### **Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber



Minimum layer thickness: 0,11 mm  
Break through time: 480 min  
Material tested:KCL 741 Dermatril® L

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0,11 mm  
Break through time: 480 min  
Material tested:KCL 741 Dermatril® L

**Body Protection**  
protective clothing

**Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**

Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

|                                                 |                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|
| a) Physical state                               | Pieces                                                                           |
| b) Color                                        | yellow                                                                           |
| c) Odor                                         | No data available                                                                |
| d) Melting point/freezing point                 | No data available                                                                |
| e) Initial boiling point and boiling range      | No data available                                                                |
| f) Flammability (solid, gas)                    | No data available                                                                |
| g) Upper/lower flammability or explosive limits | No data available                                                                |
| h) Flash point                                  | No data available                                                                |
| i) Autoignition temperature                     | No data available                                                                |
| j) Decomposition temperature                    | No data available                                                                |
| k) pH                                           | No data available                                                                |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |



- m) Water solubility No data available
- n) Partition coefficient: No data available  
n-octanol/water
- o) Vapor pressure No data available
- p) Density No data available  
Relative density No data available
- q) Relative vapor No data available  
density
- r) Particle No data available  
characteristics
- s) Explosive properties No data available
- t) Oxidizing properties No data available

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male - 5.994 mg/kg (1,1',1''-nitriлотripropan-2-ol)

Inhalation: No data available

LD50 Dermal - Rabbit - female - > 5.000 mg/kg (1,1',1''-nitriлотripropan-2-ol)

#### Skin corrosion/irritation

Skin - Rabbit (1,1',1''-nitriлотripropan-2-ol)

Result: No skin irritation - 4 h



(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit (1,1',1''-nitritolotripropan-2-ol)  
Result: Risk of serious damage to eyes. - 72 h  
(OECD Test Guideline 405)

**Respiratory or skin sensitization**

in vivo assay - Guinea pig (1,1',1''-nitritolotripropan-2-ol)  
Result: Does not cause skin sensitization.

**Germ cell mutagenicity**

Test Type: Ames test  
(1,1',1''-nitritolotripropan-2-ol)  
Test system: S. typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
(1,1',1''-nitritolotripropan-2-ol)  
Test Type: In vivo micronucleus test  
Species: Mouse

Application Route: Oral  
Method: Mutagenicity (micronucleus test)  
Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

**Endocrine disrupting properties**

**Product:**

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Cough, Shortness of breath, Headache, Nausea, Vomiting (1,1',1''-nitritolotripropan-2-ol)

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**SECTION 12: Ecological information**

**12.1 Toxicity**

Toxicity to fish                      static test LC0 - Leuciscus idus (Golden orfe) - 2.150 mg/l - 96 h



(1,1',1''-nitriлотрипропан-2-ол)  
(DIN 38412)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h (1,1',1''-nitriлотрипропан-2-ол)

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - 710 mg/l - 72 h (1,1',1''-nitriлотрипропан-2-ол)  
(Directive 67/548/EEC, Annex V, C.3.)

## 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d (1,1',1''-nitriлотрипропан-2-ол)  
Result: 0 % - Not readily biodegradable.  
(OECD Test Guideline 301F)

## 12.3 Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 42 d  
- 0,25 mg/l(1,1',1''-nitriлотрипропан-2-ол)

Bioconcentration factor (BCF): < 0,57  
(OECD Test Guideline 305C)

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Endocrine disrupting properties

### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods





## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

## Further 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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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