

## SAFETY DATA SHEET

Version 6.8  
Revision Date 08/07/2024  
Print Date 08/08/2024**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Nitrilotriacetic acid

Product Number : N9877  
Brand : Sigma-Aldrich  
CAS-No. : 139-13-9**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&amp;D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&amp;D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

**1.3 Details of the supplier of the safety data sheet**Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATESTelephone : +1 314 771-5765  
Fax : +1 800 325-5052**1.4 Emergency telephone**Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**Acute toxicity, Oral (Category 4), H302  
Eye irritation (Category 2A), H319  
Carcinogenicity (Category 2), H351

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

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## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard Statements

H302

Harmful if swallowed.

H319

Causes serious eye irritation.

H351

Suspected of causing cancer.

Precautionary Statements

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P264

Wash skin 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 + P330

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P305 + P351 + P338

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

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

P337 + P313

If eye irritation persists: Get medical advice/ attention.

P405

Store locked up.

P501

Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms

: Tris(carboxymethyl)amine  
N,N-Bis(carboxymethyl)glycine  
NTA

Formula

: C<sub>6</sub>H<sub>9</sub>NO<sub>6</sub>

Molecular weight

: 191.14 g/mol

CAS-No.

: 139-13-9

EC-No.

: 205-355-7

Component	Classification	Concentration
<b>Titriplex I</b>		
	Acute Tox. 4; Eye Irrit. 2A; Carc. 2; H302, H319, H351	<= 100 %

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

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

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

No data available

##### **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**

No data available

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

Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Combustible.

##### **5.3 Advice for firefighters**

No data available

##### **5.4 Further information**

No data available

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

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

For personal protection see section 8.

##### **6.2 Environmental precautions**

No data available

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

No data available

##### **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

No data available

## 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

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Personal protective equipment

##### 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 EN 16523-1 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

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Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

##### Control of environmental exposure

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                   |                              |
|-------------------|------------------------------|
| a) Appearance     | Form: powder<br>Color: white |
| b) Odor           | odorless                     |
| c) Odor Threshold | Not applicable               |

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d) pH	1.7 - 2.7 at 10 g/l at 23 °C (73 °F)
e) Melting point/freezing point	Melting point/ range: 245 °C (473 °F) - dec.
f) Initial boiling point and boiling range	No data available
g) Flash point	100 °C (212 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	< 0.1 hPa at 25 °C (77 °F) - OECD Test Guideline 104
l) Vapor density	No data available
m) Density	1.67 g/cm <sup>3</sup>
Relative density	No data available
n) Water solubility	1.28 g/l at 22.5 °C (72.5 °F)
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	> 400 °C (> 752 °F) at 1,013 hPa - Relative self-ignition temperature for solids
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

Dissociation constant 1.8 at 25 °C (77 °F)

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:  
 Strong oxidizing agents  
 Strong bases

Aluminum  
Copper  
Zinc

#### **10.4 Conditions to avoid**

No data 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 and female - 1,580 mg/kg

Remarks: (ECHA)

(calculated on the free acid)

Inhalation: No data available

LD50 Dermal - Rabbit - male and female - > 10,000 mg/kg

Remarks: (ECHA)

The value is given in analogy to the following substances: nitrilotriacetic acid trisodium salt

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation

(Draize Test)

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Irritating to eyes. - 24 h

Remarks: (ECHA)

##### **Respiratory or skin sensitization**

Buehler Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Remarks: The value is given in analogy to the following substances: nitrilotriacetic acid trisodium salt

##### **Germ cell mutagenicity**

Test Type: Micronucleus test

Species: Rat

Application Route: Oral

Result: negative

Remarks: (ECHA)

##### **Carcinogenicity**

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Suspected of causing cancer.

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Titriplex I)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Titriplex I)

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**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**

RTECS: AJ0175000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

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**SECTION 12: Ecological information**

**12.1 Toxicity**

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 114 mg/l - 96 h Remarks: (ECHA) The value is given in analogy to the following substances: nitrilotriacetic acid trisodium salt
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 560 - 1,000 mg/l - 48 h Remarks: (ECHA) The value is given in analogy to the following substances: nitrilotriacetic acid trisodium salt
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3) Remarks: The value is given in analogy to the following substances: nitrilotriacetic acid trisodium salt

Toxicity to bacteria      microtox test EC50 - Photobacterium phosphoreum - 1,003 mg/l -  
15 min  
Remarks: (Lit.)

Toxicity to                      flow-through test NOEC - Pimephales promelas (fathead minnow) - >  
fish(Chronic toxicity)      54 mg/l - 224 d  
Remarks: (ECHA)  
The value is given in analogy to the following substances:  
nitritotriacetic acid trisodium salt

### **12.2 Persistence and degradability**

Biodegradability              aerobic - Exposure time 14 d  
Result: 89 % - Readily biodegradable.  
(OECD Test Guideline 301B)

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not  
conducted

### **12.6 Endocrine disrupting properties**

No data available

### **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**

### **DOT (US)**

Not dangerous goods

### **IMDG**

Not dangerous goods

### **IATA**

Not dangerous goods

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The life science business of Merck KGaA, Darmstadt, Germany  
operates as MilliporeSigma in the US and Canada

**MILLIPORE  
SIGMA**

### Further information

Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15: Regulatory information

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

Titriplex I	139-13-9	>= 90 - <= 100 %
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### US State Regulations

#### Massachusetts Right To Know

Titriplex I	139-13-9
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#### Pennsylvania Right To Know

Titriplex I	139-13-9
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#### Maine Chemicals of High Concern

Product does not contain any listed chemicals

#### Vermont Chemicals of High Concern

Product does not contain any listed chemicals

#### Washington Chemicals of High Concern

Product does not contain any listed chemicals

#### California Prop. 65

WARNING: This product can expose you to chemicals including Titriplex I, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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**SECTION 16: Other information**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

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