SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 30.03.2019
Revised on : 23.09.2025

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

1.1 Product identifiers

Product name	Nitrilotriacetic Acid
Product Number	PSR50233
Brand	PureSynth research chemicals
CAS No.	139-13-9

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

Identified uses : Secondary Reference Standard

1.3 Details of the supplier of the safety data sheet

Company **PureSynth Research Chemicals GmbH.**

64683 Einhausen Marie-Curie-StraBe. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute toxicity, Oral (Category 4), H302
Eye irritation (Category 2), H319
Carcinogenicity (Category 2), H351
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Pictogram

Signal word Warning

Hazard statement(s)

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.

Precautionary statement(s)

P202	Do not handle until all safety precautions have been read and understood.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
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.
Supplemental Hazard Statements	none

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

Common names & Synonyms	Mol. formula	CAS number
N,N-Bis(carboxymethyl)glycine	$C_6H_9NO_6$	139-13-9
Component	**Classification**	**Concentration**
Titriplex I	Acute Tox. 4; Eye Irrit. 2; Carc. 2; H302, H319, H351	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
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.
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
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Carbon oxides Nitrogen oxides (NOx) Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Advice for fire-fighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
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.

SECTION 6: Accidental release measures

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.
Environmental precautions	Do not let product enter drains.
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.
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	Advice on safe handling: Work under hood. Do not inhale substance/mixture. Hygiene measures: Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	Storage conditions- Tightly closed. Dry. Storage class- Storage class (TRGS 510): 11: Combustible Solids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls / Personal protection

Control parameters	Ingredients with workplace control parameters
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 Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min 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 Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min
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 P3 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.

SECTION 9: Physical and chemical properties

Appearance	Form: Solid Colour: White
Odour	odorless
pH - Value	1.7 – 2.7 at 10 g/l at 23 °C
Density	1.67 g/cm3
Boiling Point	No data available
Melting Point	242 °C
Solubility in water	1.28 g/l at 22.5 °C
Flash point	100 °C - closed cup
Vapour pressure	< 0.1 hPa at 25 °C
Auto -ignition temperature	> 400 °C at 1013 hPa - Relative self-ignition temperature for solids
Vapour density	No data available
Flammability (solid, gas)	No data available .
Evaporation rate	No data available
Partition coefficient: n- octanol / water	No data available
Viscosity	Viscosity, dynamic : No data available Viscosity, kinematic : No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidizing properties	None

Other safety information: Dissociation constant: 1.8 at 25 °C

SECTION 10: Stability and reactivity

Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. 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.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Violent reactions possible with: Strong oxidizing agents Strong bases Aluminum Copper Zinc
Condition to avoid	Strong heating
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - 1580 mg/kg Remarks: (ECHA) (calculated on the free acid)

	Acute toxicity estimate Oral - 1580 mg/kg (ATE value derived from LD50/LC50 value) Inhalation: No data available LD50 Dermal - Rabbit - male and female - > 10000 mg/kg Remarks: (ECHA)
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)
Germ cell mutagenicity	No data available
Carcinogenicity	Suspected of causing cancer.
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
Additional Information	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. Repeated dose toxicity - Rabbit - Dermal - NOAEL (No observed adverse effect level) - 50 mg/kg Remarks: (ECHA) Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 114 mg/l - 96 h Remarks: (in analogy to similar products) (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 560 - 1000 mg/l - 48 h Remarks: (in analogy to similar products) (ECHA)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3)
Toxicity to bacteria	microtox test EC50 - Photobacterium phosphoreum - 1003 mg/l - 15 min Remarks: (Lit.)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC- Pimephales promelas(fathead minnow)- > 54 mg/l- 224 d Remarks: (in analogy to similar products) (ECHA)
Persistence and degradability	Biodegradability- aerobic - Exposure time 14 d Result: 89 % - Readily biodegradable. (OECD Test Guideline 301B)
Bio accumulative potential	No data available
Mobility in soil	No data available
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.
Endocrine disrupting properties	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.

Other adverse effects No data available

SECTION 13: Disposal considerations

Waste treatment methods Product No data available

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	-	Not dangerous goods	-	-	No
IMDG	-	Not dangerous goods	-	-	No
IATA	-	Not dangerous goods	-	-	No

SECTION 15: Regulatory information

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

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

Other regulations:

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.

Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

The information in this SDS 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. The user must be determined suitability of this information for his application.