

# SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.0  
Prepared on : 28.02.2026  
Revised on : -

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

### 1.1 Product identifiers

**Product name** 1,2,3-Trichloropropane  
**Product Number** PSR50247  
**Brand** PureSynth research chemicals  
**CAS No.** 96-18-4

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

**Identified uses** Laboratory chemicals, Manufacture of substances

### 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

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

Acute toxicity, (Category 3)	H301: Toxic if swallowed.
Acute toxicity, (Category 3)	H331: Toxic if inhaled.
Acute toxicity, (Category 3)	H311: Toxic in contact with skin.
Eye irritation, (Category 2)	H319: Causes serious eye irritation.
Germ cell mutagenicity, (Category 2)	H341: Suspected of causing genetic defects.
Carcinogenicity, (Category 1B)	H350: May cause cancer.
Reproductive toxicity, (Category 1B)	H360F: May damage fertility.
Specific target organ toxicity - repeated exposure, (Category 1), Kidney, Liver, Mucous membranes	H372: Causes damage to organs through prolonged or repeated exposure if inhaled.
Long-term (chronic) aquatic hazard, (Category 3)	H412: Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

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

PS-FORM-QA-11; Ver. No.: 2.1/23.09.2025

**Pictogram**



**Signal word**

Danger

**Hazard statement(s)**

H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360F	May damage fertility.
H372	Causes damage to organs (Kidney, Liver, Mucous membranes) through prolonged or repeated exposure if inhaled.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statement(s)**

**Prevention:**

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P352 + P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**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.

Ecological 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.

Toxicological 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.

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

**3.1 Substances**

Common names & Synonyms	Mol. formula	CAS number
Glycerol trichlorohydrin	C <sub>3</sub> H <sub>5</sub> Cl <sub>3</sub>	96-18-4
Component	Classification	Concentration
1,2,3-Trichloropropane	Acute Tox. 3; Eye Irrit. 2; Muta. 2; Carc. 1B; Repr. 1B; STOT RE 1; Aquatic Chronic 3; H301, H331, H311, H319, H341, H350, H360F, H372, H412	<= 100 %

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General advice**

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

<b>If inhaled</b>	After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
<b>In case of skin contact</b>	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
<b>In case of eye contact</b>	After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
<b>If swallowed</b>	If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.
<b>Most important symptoms and effects, both acute and delayed</b>	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
<b>Indication of any immediate medical attention and special treatment needed</b>	No data available

## SECTION 5: Firefighting measures

<b>Extinguishing media</b>	Water Foam Carbon dioxide (CO <sub>2</sub> ) Dry powder
<b>Suitable extinguishing media</b>	For this substance/mixture no limitations of extinguishing agents are given.
<b>Unsuitable extinguishing media</b>	Carbon oxides
<b>Special hazards arising from the substance or mixture</b>	Hydrogen chloride gas 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.
<b>Advice for firefighters</b>	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
<b>Further information</b>	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6: Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
<b>Environmental precautions</b>	Do not let product enter drains.
<b>Methods and materials for containment and cleaning up</b>	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.
<b>Reference to other sections</b>	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. Avoid generation of vapours/aerosols.

### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

### 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

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects.

### 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

### Appropriate engineering controls

No data available

### 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. required

#### Skin protection

#### Body Protection

#### Respiratory protection

Protective clothing required when vapours/aerosols 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 ABEK 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

<b>Appearance</b>	Form: liquid
	Colour: colourless
<b>Odour</b>	pungent
<b>pH - Value</b>	No data available
<b>Density</b>	1.387 g/cm <sup>3</sup> at 25 °C - lit.
<b>Boiling Point</b>	No data available
<b>Melting Point</b>	-14.0 °C - lit.
<b>Solubility in water</b>	No data available
<b>Flash point</b>	74 °C - closed cup
<b>Vapour pressure</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Vapour density</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Partition coefficient: n- octanol / water</b>	No data available
<b>Viscosity</b>	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
<b>Explosive properties</b>	No data available
<b>Upper / lower flammability or explosive limits</b>	Upper explosion limit: 12.6 %(V) Lower explosion limit: 3.2 %(V)
<b>Oxidizing properties</b>	None

**Other safety information:** No data available

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

<b>Acute toxicity</b>	LD50 Oral - Rat - male - 120 mg/kg (OECD Test Guideline 401) Acute toxicity estimate Oral - 120 mg/kg (Calculation method) LC50 Inhalation - Rat - male and female - 4 h - > 4.8 mg/l - vapor  (OECD Test Guideline 403)
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	Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, After a latency period:, Lung edema Acute toxicity estimate Inhalation – 4.80048 mg/l - vapor (Calculation method) LD50 Dermal - Rabbit - male and female - 523 mg/kg (OECD Test Guideline 402) Acute toxicity estimate Dermal - 523 mg/kg (Calculation method)
<b>Skin corrosion/irritation</b>	Skin - Rabbit Result: No skin irritation - 24 h (OECD Test Guideline 404)
<b>Serious eye damage/eye irritation</b>	Eyes - Rabbit Result: Eye irritation (OECD Test Guideline 405)
<b>Respiratory or skin sensitization</b>	Maximisation Test - Guinea pig Result: positive (OECD Test Guideline 406)
<b>Germ cell mutagenicity</b>	Suspected of causing genetic defects. Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: positive.
<b>Carcinogenicity</b>	Presumed to have carcinogenic potential for humans
<b>Reproductive toxicity</b>	May damage fertility.
<b>Specific target organ toxicity - single exposure</b>	No data available
<b>Specific target organ toxicity - repeated exposure</b>	Inhalation - Causes damage to organs through prolonged or repeated exposure. - Kidney, Liver, Mucous membranes Ingestion, Skin contact - May cause damage to organs through prolonged or repeated exposure. - Kidney, Liver
<b>Aspiration hazard</b>	No data available
<b>Additional Information</b>	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. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice. Pancreas. - .

## SECTION 12: Ecological information

### Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) – 66.5 mg/l - 96 h (US-EPA)

Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - ca. 20 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (green algae) – 49.6 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test IC50 - Bacteria - 30 mg/l - 24 h (ISO 9509)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	semi-static test EC10 - Daphnia magna (Water flea) - 6 mg/l - 21 d (OECD Test Guideline 211)
<b>Persistence and degradability</b>	aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301C)
<b>Bioaccumulative potential</b>	Cyprinus carpio (Carp) - 6 Weeks (1,2,3-Trichloropropane)  Bioconcentration factor (BCF): 5.3 - 13 (OECD Test Guideline 305)
<b>Mobility in soil</b>	No data available
<b>Results of PBT and vPvB assessment</b>	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. <b>Assessment:</b> 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.
<b>Other adverse effects</b>	Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

<b>Waste treatment methods</b>	No data available
<b>Products</b>	
<b>Contaminated packaging</b>	Dispose of as unused product.

### SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>ADR / RID</b>	2810	TOXIC LIQUID, ORGANIC, N.O.S. (1,2,3-Trichloropropane)	6.1	III	no
<b>IMDG</b>	2810	TOXIC LIQUID, ORGANIC, N.O.S. (1,2,3-Trichloropropane)	6.1	III	no
<b>IATA</b>	2810	Toxic liquid, organic, n.o.s. (1,2,3-Trichloropropane)	6.1	III	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. 1907/2

#### Authorisations and/or restrictions on use

REACH - Candidate List of Substances of Very High Concern    1,2,3-Trichloropropane  
for Authorisation (Article 59).

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) 1,2,3-Trichloropropane

**National legislation**

H2 ACUTE TOXIC

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

**Other regulations**

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

**Chemical safety assessment**

For this product a chemical safety assessment was not carried out.

**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.