

SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 30.03.2019
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SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name Chloroform
Product Number PSI023
Brand PureSynth research chemicals
CAS No. 67-66-3

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

Identified uses : PurTech standard for GC

1.3 Details of the supplier of the safety data sheet

Company PureSynth Research Chemicals Pvt. Ltd.
FB-121, High Street mall, Kapurbawdi junction, Thane (W)

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, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 3), H331
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 2), H361d
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Specific target organ toxicity - repeated exposure, Oral (Category 1), Liver, Kidney, H372

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H331 Toxic if inhaled.
H351 Suspected of causing cancer.

H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H361d	Suspected of damaging the unborn child.
Precautionary statement(s)	
P202	Do not handle until all safety precautions have been read and understood.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

- 2.3 **Other hazards:** This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
Trichloromethane Methylidyne trichloride	CHCl ₃	67-66-3
Component	Classification	Concentration
Chloroform	Acute Tox. 4; Acute Tox. 3; Sk Eye Irrit. 2; Carc. 2; Repr. 2; S ⁻ STOT RE 1; H302, H331, H31 H351, H361d, H336, H3 Concentration limits: 20 %: S ⁻ H336;	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
In case of skin contact	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	For this substance/mixture no limitations of extinguishing agents are given
Unsuitable extinguishing media	Carbon oxides Hydrogen chloride gas
Special hazards arising from the substance or mixture	Not combustible. Fire may cause evolution of: Hydrogen chloride gas, Phosgene Ambient fire may liberate hazardous vapours
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: Do not breathe vapors, aerosols. 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 with liquid-absorbent material. Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols 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	Protected from light. Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Recommended storage temperature see product label. Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials 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	Personal protective equipment
Appropriate engineering controls	
Personal protective equipment:	
Eye / face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.
Body Protection	protective clothing
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance	Form: liquid
Odour	Colour: colorless
pH - Value	sweet
Density	No data available
Boiling Point	1.49 g/cm ³ at 25 °C
Melting Point	60.5 – 61.5 °C at 1.013.25 hPa
Solubility in water	-64 °C
Flash point	8.7 g/l at 23 °C
Vapour pressure	No data available
Auto -ignition temperature	210 hPa at 20 °C
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	No data available
Explosive properties	No data available

Upper / lower flammability or explosive limits	No data available
Oxidizing properties	none

Other safety information: Solubility in other Solvents organic solvent at 20 °C - miscible
Relative vapor Density 4.12 - (Air = 1.0)

SECTION 10: Stability and reactivity

Reactivity	No data available
Chemical stability	Sensitivity to light heat-sensitive The product is chemically stable under standard ambient conditions (room temperature) . Contains the following stabilizer(s): 2-methyl-2-butene ($\geq 0,001$ - $\leq 0,015$ %) Risk of explosion with: Ammonia Amines nitrogen oxides bases Oxygen alkali amides organic nitro compounds strong alkalis Fluorine peroxi compounds
Possibility of hazardous reactions	Alkaline earth metals Alkali metals Powdered metals Methanol with alcoholates strong alkalis Iron in powder form magnesium in powder form various alloys sensitive to shock Methanol With Sodium hydroxide
Condition to avoid	no information available
Incompatible materials	rubber, various plastics
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

	Acute toxicity estimate Oral - 908 mg/kg LD50 Oral - Rat - male - 908 mg/kg Acute toxicity estimate Oral - 908 mg/kg (ATE value derived from LD50/LC50 value)
Acute toxicity	Acute toxicity estimate Inhalation - 4 h - 3.1 mg/l - vapor(Calculation method) LC50 Inhalation - Rat - 6 h - 9,17 mg/l - vapor Acute toxicity estimate Inhalation - Expert judgment - 4 h – 3.1 mg/l - vapor
Skin corrosion/irritation	Skin - Rabbit

	Result: Irritating to skin. - 24 h
	Remarks: (ECHA)
	Remarks: Drying-out effect resulting in rough and chapped skin.
	Skin - Rabbit
	Result: slight irritation
Serious eye damage/eye irritation	Eyes - Rabbit
	Result: Irritating to eyes.
Respiratory or skin sensitization	Maximization Test - Guinea pig
	Result: negative
	Test Type: Ames test
	Test system: Escherichia coli/Salmonella typhimurium
	Metabolic activation: with and without metabolic activation
	Result: negative
	Remarks: (ECHA)
	Test Type: unscheduled DNA synthesis assay
	Test system: Liver
	Metabolic activation: without metabolic activation
	Result: negative
	Test Type: Micronucleus test
	Species: Rat
Germ cell mutagenicity	Cell type: Red blood cells (erythrocytes)
	Application Route: Oral
	Result: negative
	Test Type: unscheduled DNA synthesis assay
	Species: Rat
	Cell type: Liver cells
	Application Route: Oral
	Method: OECD Test Guideline 486
	Result: negative
	Test Type: in vivo assay
	Species: Mouse
	Application Route: Inhalation
Carcinogenicity	Suspected of causing cancer.
Reproductive toxicity	Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure	Oral - Causes damage to organs through prolonged or repeated exposure. - Liver, Kidney
Aspiration hazard	No data available
	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.
Additional Information	Vomiting, Cough, irritant effects, Shortness of breath, respiratory arrest, narcosis, Dizziness, Nausea, agitation, spasms, inebriation, Headache, Stomach/intestinal disorders, ataxia (impaired locomotor coordination), cardiovascular disorders Drying-out effect resulting in rough and chapped skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	flow-through test NOEC - <i>Oryzias latipes</i> - 0,15 mg/l - 9 Months
Toxicity to daphnia and other aquatic invertebrates	semi-static test NOEC - <i>Daphnia magna</i> (Water flea) - 6,3 mg/l - 21 d
Toxicity to bacteria	flow-through test NOEC - <i>Oryzias latipes</i> - 0,15 mg/l - 9 Months
Toxicity to algae	static test LC50 - <i>Pimephales promelas</i> (fathead minnow) - 14 mg/l - 96 h

Persistence and degradability

No data available

Biodegradability

No data available

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, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at Levels of 0.1% or higher.

Endocrine disrupting properties

No data available

Other adverse effects

No data available

SECTION 13: Disposal considerations

Waste treatment methods	Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleansed containers like the product itself.
Products	
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	1888	CHLOROFORM	6.1	III	no
IMDG	1888	CHLOROFORM	6.1	III	no
IATA	1888	Chloroform	6.1	III	no

SECTION 15: Regulatory information

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

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

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.