PureSynth
Research Chemicals

SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision date: 30/07/2019

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
Index-No.	:	602-006-00-4
CAS-No.	:	67-66-3

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

Identified uses	:	Standard for GC

1.3 Details of the supplier of the safety data sheet

Company	:	PureSynth Research Chemicals Pvt. Ltd.
		A-27, A.P.I.E, Hyderabad Telangana-500037

1.4 Emergency telephone number

Worldwide Helpline No. : +61481109229

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 (Category 1), H372

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 Danger

Hazard statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.

H372	Causes damage to organs through prolonged or repeated exposure.
Precautionary statement(s)	
P261	Avoid breathing vapours.
P281	Use personal protective equipment as required.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove Contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER /doctor.
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

Synonyms	:	Trichloromethane Methylidyne trichloride
Formula	:	$CHCl_3$
Molecular weight	:	119.38 g/mol
CAS-No.	:	67-66-3
Index-No.	:	602-006-00-4

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Chloroform		
CAS-No. 67-66-3 Index-No. 602-006-00-4	Acute Tox. 4; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; Carc. 2; Repr. 2; STOT SE 3; STOT RE 1; H302, H331, H315, H319, H351, H361d, H336, H372	<= 100 %

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 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

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engine 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
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid, clear Color: colorless
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	-63 °C
f)	Initial boiling point and boiling range	61 °C (1013 hPa)
g)	Flash point	No data available
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	211 hPa (20 °C)
l)	Vapor density	No data available
m)	Relative density	1.492 g/mL at 25 °C
n)	Water solubility	0.795 g/100 g
o)	Partition coefficient: n-octanol/water	log Pow: 1.97
p)	Auto-ignition temperature	> 600 °C (1013 hPa)
q)	Decomposition temperature	No data available

r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

Surface tension	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.
Contains the following stabiliser(s):
(>=0.001 - <=0.015 %)

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Strong oxidizing agents, Strong bases, Magnesium, Sodium/sodium oxides, Lithium

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 908 mg/kg(Chloroform)
Remarks: Behavioral:Change in motor activity (specific assay). Behavioral:Ataxia. Lungs, Thorax, or Respiration:Respiratory stimulation.
LOEC Inhalation - Rat - male - 6 h - 500 ppm(Chloroform)
LD50 Dermal - Rabbit - > 20,000 mg/kg(Chloroform)

Skin corrosion/irritation
Skin - Rabbit(Chloroform)
Result: Irritating to skin. - 24 h

Serious eye damage/eye irritation
Eyes - Rabbit(Chloroform)
Result: Irritating to eyes. - 24 h

Respiratory or skin sensitisation
Did not cause sensitisation on laboratory animals.(Chloroform)

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.(Chloroform)

Carcinogenicity
The National Cancer Institute (NCI) has found clear evidence for carcinogenicity. Limited evidence of a carcinogenic effect.(Chloroform)

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

Reproductive toxicity
Suspected of damaging the unborn child. Suspected human reproductive toxicant(Chloroform)

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.(Chloroform)

Specific target organ toxicity - repeated exposure
The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1. -

Liver, Kidney

Aspiration hazard
No data available (Chloroform)

Additional Information
RTECS: FS9100000

Vomiting, Gastrointestinal disturbance, Exposure to and/or consumption of alcohol may increase toxic effects.(Chloroform)

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - 162 mg/l - 48 h(Chloroform)
	LC100 - Leuciscus idus (Golden orfe) - 220 mg/l - 48 h(Chloroform)
	LC50 - other fish - 97 mg/l - 96 h(Chloroform)
	LC50 - Danio rerio (zebra fish) - 121 mg/l - 96 h(Chloroform)
	NOEC - Oryzias latipes - 122 mg/l - 10 d(Chloroform)
	NOEC - Oncorhynchus mykiss (rainbow trout) - 24 mg/l - 96 h(Chloroform)
Toxicity to daphnia	EC50 - Daphnia magna (Water flea) - 79.00 mg/l - 24 h(Chloroform)
	Immobilization EC50 - Daphnia magna (Water flea) - 51.6 mg/l - 48 h(Chloroform)
	NOEC - Daphnia magna (Water flea) - 120 mg/l - 11 d(Chloroform)
Toxicity to algae	EC50 - No information available. - 500.00 mg/l - 24 h(Chloroform)

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential

Bioaccumulation	Lepomis macrochirus (Bluegill) - 14 d - 0.11 mg/l(Chloroform)
	Bioconcentration factor (BCF): 6

12.4 Mobility in soil
No data available(Chloroform)

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 Other adverse effects
Harmful to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1888 IMDG: 1888 IATA: 1888

14.2 UN proper shipping name

ADR/RID: CHLOROFORM
IMDG: CHLOROFORM
IATA: Chloroform

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

15.1 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.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Further information

License granted to make unlimited paper copies for internal use only.
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. PureSynth Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.See http://www.pure-synth.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.
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.