

# SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.0  
Prepared on : 13.04.2026  
Revised on : -

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

### 1.1 Product identifiers

**Product name** 2,2,3-Trimethylbutane  
**Product Number** PSI1387  
**Brand** PureSynth research chemicals  
**CAS No.** 464-06-2

### 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 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

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

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

**Pictogram**



**Signal word** Danger

**Hazard statement(s)**

H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.

H410	Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement(s)</b>	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P273	Avoid release to the environment.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P331	Do NOT induce vomiting.
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.

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. Lachrymator.

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

**3.1 Substances**

Common names & Synonyms	Mol. formula	CAS number
Pentamethylethane	C <sub>7</sub> H <sub>16</sub>	464-06-2
Component	Classification	Concentration
2,2,3-Trimethylbutane	-	>= 90 - <= 100

**SECTION 4: First aid measures**

**Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>If inhaled</b>	After inhalation: fresh air. Call in physician.
<b>In case of skin contact</b>	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
<b>In case of eye contact</b>	After eye contact: rinse out with plenty of water. remove contact lenses.
<b>If swallowed</b>	After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.
<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: Fire fighting measures

### Extinguishing media

#### Suitable extinguishing media

Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given. For this substance/mixture no limitations of extinguishing agents are given.

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

Combustible.

Pay attention to flashback.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

Carbon oxides

#### 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

Remove container from danger zone and cool with water. 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 vapours, 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.

#### Environmental precautions

Do not let product enter drains. Risk of explosion.

#### 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

##### 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

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

#### Specific end use(s)

Storage class (TRGS 510) : 3, Flammable liquids

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**SECTION 8: Exposure controls / Personal protection**

<b>Control parameters</b>	Ingredients with workplace control parameters
<b>Exposure controls</b>	
<b>Appropriate engineering controls</b>	No data available
<b>Personal protective equipment:</b>	
<b>Eye / face protection</b>	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
<b>Hand protection</b>	Material: Nitrile rubber Break through time: 10 min Glove thickness: 0.11 mm Protective index: Splash contact  Material: Nitrile rubber Break through time: 480 min Glove thickness: 0.4 mm Protective index: Full contact
<b>Skin and Body Protection</b>	Remarks: 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 Flame retardant antistatic protective clothing.
<b>Respiratory protection</b>	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.
<b>Control of environmental exposure</b>	Do not let product enter drains. Risk of explosion.

## SECTION 9: Physical and chemical properties

<b>Appearance</b>	Form: Liquid
	Colour: Colourless
<b>Odour</b>	No data available
<b>pH - Value</b>	No data available
<b>Density</b>	0.69 g/cm <sup>3</sup> (25 °C) Method: lit.
<b>Boiling Point</b>	80.9 °C Method: lit.
<b>Melting Point</b>	-25 °C Method: lit.
<b>Solubility in water</b>	No data available
<b>Flash point</b>	-7 °C Method: closed cup
<b>Vapour pressure</b>	232.286 hPa (37.7 °C)
<b>Auto-ignition temperature</b>	450 °C
<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: 7 %(V) Lower explosion limit: 1 %(V)
<b>Oxidizing properties</b>	No data available

**Other safety information:** No data available

## SECTION 10: Stability and reactivity

<b>Reactivity</b>	Vapours may form explosive mixture with air.
<b>Chemical stability</b>	The product is chemically stable under standard ambient conditions (room temperature)
<b>Possibility of hazardous reactions</b>	No data available
<b>Condition to avoid</b>	Warming.
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition products</b>	In the event of fire: see section 5

## SECTION 11: Toxicological information

<b>Acute toxicity</b>	Oral: No data available Inhalation: No data available Dermal: No data available
<b>Skin corrosion/irritation</b>	Remarks: No data available
<b>Serious eye damage/eye irritation</b>	Remarks: No data available
<b>Germ cell mutagenicity</b>	No data available
<b>Respiratory or skin sensitization</b>	No data available
<b>Carcinogenicity</b>	No data available
<b>Reproductive toxicity</b>	No data available
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness or dizziness.

<b>Specific target organ toxicity - repeated exposure</b>	No data available
<b>Aspiration hazard</b>	The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.
<b>Additional Information</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. Prolonged or repeated exposure to skin causes defatting and dermatitis., Central nervous system depression, narcosis

## SECTION 12: Ecological information

### Toxicity

Toxicity to fish  
Remarks: No data available  
LC50: 0.1 mg/l  
Exposure time: 96.0 h

Toxicity to daphnia and other aquatic invertebrates  
No data available

Toxicity to algae  
No data available

Toxicity to bacteria  
No data available

**Persistence and degradability**  
Remarks: No data available

**Bio accumulative potential**  
Remarks: No data available

**Mobility in soil**  
Remarks: 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**  
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

**Contaminated packaging**  
No data available

## SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>ADR / RID</b>	1206	HEPTANES	3	II	yes
<b>IMDG</b>	1206	HEPTANES	3	II	yes
<b>IATA</b>	1206	Heptanes	3	II	-

## 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

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

Conditions of restriction for the following entries should be considered:

Number on list 3

Number on list 40

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Regulation (EU) No 2024/590 on substances that deplete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)

Not applicable

REACH - List of substances subject to authorisation (Annex XIV)

Not applicable

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

E1 ENVIRONMENTAL HAZARDS

P5c FLAMMABLE LIQUIDS

#### 15.2 Other regulations:

Take note of Dir 94/33/EC on the protection of young people at work.

#### 15.3 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.