

SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Revision date: 30/09/2023

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

1.1 Product identifiers

Product name	Tetrabutyl Hydroperoxide
Product Number	PSI454
Brand	PureSynth research chemicals
CAS No.	75-91-2

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

Identified uses : Laboratory chemicals.

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

Flammable liquids, (Category 3)	H226: Flammable liquid and vapor.
Organic peroxides, (Type F)	H242: Heating may cause a fire.
Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Acute toxicity, (Category 2)	H330: Fatal if inhaled.
Acute toxicity, (Category 3)	H311: Toxic in contact with skin.
Skin corrosion, (Sub-category 1C)	H314: Causes severe skin burns and eye damage.
Serious eye damage, (Category 1)	H318: Causes serious eye damage.
Skin sensitization, (Category 1)	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, (Category 2)	H341: Suspected of causing genetic defects.
Specific target organ toxicity - single exposure, (Category 3), Respiratory system	H335: May cause respiratory irritation.
Long-term (chronic) aquatic hazard, (Category 2)	H411: Toxic to aquatic life with long lasting effects.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H242	Heating may cause a fire.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately 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
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Supplemental Hazard Statements	none

2.2 **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
TBHP	(CH ₃) ₃ COOH	75-91-2
Component	Classification	Concentration
tert-Butyl hydroperoxide	Flam. Liq. 3; Org. Perox. A; Acute Tox. 4; Acute Tox. 2; Acute Tox. 3; Skin Corr. 1C; Eye Dam. 1; Skin Sens. 1; Muta. 2; STOT SE 3; Aquatic Chronic 2; H226, H240, H302, H330, H311, H314, H318, H317, H341, H335, H411	>= 70 - < 90%

SECTION 4: First aid measures

Description of first aid measures

General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. 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. Immediately call in ophthalmologist Remove contact lenses.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. Do not attempt to neutralise.
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	Water Foam Carbon dioxide (CO ₂) Dry powder
Suitable extinguishing media	
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given. Carbon oxides Mixture with combustible ingredients.
Special hazards arising from the substance or mixture	Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. 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	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 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. 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 carefully 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. 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 locked up or in an area accessible only to qualified or authorized persons. Separately or together with other organic peroxides only and away from sources of ignition and heat Recommended storage temperature : 2 - 8 °C Storage class (TRGS 510): 5.2: Organic peroxides and self-reacting hazardous materials
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	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	Flame retardant antistatic protective clothing.
Respiratory protection	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
Control of environmental exposure	Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

Appearance	Form : liquid Colour : light yellow
Odour	No data available
pH - Value	4.3
Density	0.93 g/mL at 25 °C
Boiling Point	96.2 °C at 1013 hPa
Melting Point	-3 °C at 1013 hPa
Solubility in water	soluble
Flash point	42 °C - closed cup
Vapour pressure	30.73 hPa at 20 °C
Auto-ignition temperature	No data available
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, kinematic: No data available Viscosity, dynamic: 4.4 Pas at 20 °C
Explosive properties	Not classified as explosive.
Upper / lower flammability or explosive limits	Upper explosion limit: 10.15 %(V) Lower explosion limit: 5.75 %(V)
Oxidizing properties	none

Other safety information: No data available

SECTION 10: Stability and reactivity

Reactivity	Vapor/air-mixtures are explosive at intense warming.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	No data available
Condition to avoid	Heating
Incompatible materials	Powdered metals, Organic materials Strong oxidizing agents
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	Oral: No data available Acute toxicity estimate Inhalation - 4 h – 1.2 mg/l – vapour Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract Acute toxicity estimate Dermal – 628.57 mg/kg
Skin corrosion/irritation	Mixture causes burns.
Serious eye damage/eye irritation	Mixture causes serious eye damage. Risk of blindness
Respiratory or skin sensitization	Mixture may cause an allergic skin reaction.
Germ cell mutagenicity	Evidence of genetic defects

Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	Mixture may cause respiratory irritation.
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available

Additional Information

Endocrine disrupting properties

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

SECTION 12: Ecological information

Toxicity	No data available
Persistence and degradability	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	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	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	3109	ORGANIC PEROXIDE TYPE F, LIQUID (tert-BUTYL HYDROPEROXIDE)	5.2 (8)	-	No
IMDG	3109	ORGANIC PEROXIDE TYPE F, LIQUID (tert-BUTYL HYDROPEROXIDE)	5.2 (8)	-	No
IATA	3109	Organic peroxide type F, liquid (tert-Butyl hydroperoxide)	5.2 (8)	-	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

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.