

## Chemical Safety Data Sheet MSDS / SDS

**[1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide SDS**

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide

CAS: 25155-25-3

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

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Organic peroxides, Type D

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 4

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H242 Heating may cause a fire

H413 May cause long lasting harmful effects to aquatic life

### Precautionary statement(s)

#### Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P234 Keep only in original packaging.

P235 Keep cool.

P240 Ground and bond container and receiving equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P273 Avoid release to the environment.

#### Response

P370+P378 In case of fire: Use ... to extinguish.

#### Storage

P403 Store in a well-ventilated place.

P410 Protect from sunlight.

P411 Store at temperatures not exceeding ...°C/...°F.

P420 Store separately.

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Other hazards which do not result in classification

no data available

### SECTION 3: Composition/information on ingredients

#### Substance

Chemical name:	[1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide
Common names and synonyms:	[1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide
CAS number:	25155-25-3
EC number:	246-678-3
Concentration:	100%

### SECTION 4: First aid measures

#### Description of necessary first-aid measures

##### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

##### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

##### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

##### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

#### Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 145 [Organic Peroxides (Heat and Contamination Sensitive)]: Fire may produce irritating, corrosive and/or toxic gases. Ingestion or contact (skin, eyes) with substance may cause severe injury or burns. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)

### **Indication of immediate medical attention and special treatment needed, if necessary**

Peroxides should be washed promptly from the skin to prevent irritation. In the case of eye contact, the eyes should be flushed immediately with large amounts of water, and medical attention should be obtained. ... Medical attention should also be obtained in case of accidental ingestion. ... Peroxides, Organic and Inorganic

## **SECTION 5: Firefighting measures**

### **Suitable extinguishing media**

In case of fire, water should be applied by the sprinkler system or by hose from a safe distance, preferably with a fog nozzle. Foam may be necessary instead if the peroxide is diluted in a low density flammable solvent. Portable extinguishers should not be used except for very small fires. Peroxides threatened by fire should be wetted from a safe distance for cooling. Peroxides, Organic and Inorganic

### **Specific hazards arising from the chemical**

Flash point data for this compound are not available, however, it is probably combustible. (NTP, 1992)

### **Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

Spills should be cleaned up promptly using non-sparking tools and an inert, moist diluent such as vermiculite or sand. Sweepings may

be placed in open containers or polyethylene bags and the area washed with water and detergent. Spilled, contaminated, waste or questionable peroxides should be destroyed. Peroxides, Organic and Inorganic

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### **Conditions for safe storage, including any incompatibilities**

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

### **Occupational Exposure limit values**

no data available

### **Biological limit values**

no data available

### **Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### **Individual protection measures, such as personal protective equipment (PPE)**

#### **Eye/face protection**

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### **Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Solid. Waxy.
Colour:	Yellowish.
Odour:	no data available
Melting point/freezing point:	$\geq 37 - \leq 54$ °C.
Boiling point or initial boiling point and boiling range:	374.8°C at 760 mmHg
Flammability:	no data available
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	>230 °F
Auto-ignition temperature:	> 430. Atm. press.:1 017 hPa.
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available

Solubility:	less than 1 mg/mL at 70° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Pow = > 5.5. Temperature:20 °C.;log Pow = 7.3. Temperature:20 °C.
Vapour pressure:	0 mBar. Temperature:20 °C. Remarks:Extrapolated data.;0 mBar. Temperature:50 °C. Remarks:Extrapolated data.;0 mBar. Temperature:60 °C. Remarks:Extrapolated data.
Density and/or relative density:	0.97. Temperature:20 °C.
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

### Possibility of hazardous reactions

BIS(TERT-BUTYLDIOXYISOPROPYL)BENZENE may polymerize and/or decompose if heated. (NTP, 1992)

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

no data available

## **SECTION 11: Toxicological information**

### **Acute toxicity**

Oral: LD0 - rat (female) - > 2 000 mg/kg bw.

Inhalation: no data available

Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available



**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: LC50 - *Pimephales promelas* - 750 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: NOELR - *Daphnia magna* - > 0.022 mg/L - 48 h.

Toxicity to algae: NOELR - *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*) - > 1 mg/L - 72 h.

Toxicity to microorganisms: NOEC - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 30 min.

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**Other adverse effects**

no data available

**SECTION 13: Disposal considerations****Disposal methods**

## Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

## Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### UN Number

ADR/RID: UN3106 (For reference only, please check.)  
IMDG: UN3106 (For reference only, please check.)  
IATA: UN3106 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: ORGANIC PEROXIDE TYPE D, SOLID (For reference only, please check.)  
IMDG: ORGANIC PEROXIDE TYPE D, SOLID (For reference only, please check.)  
IATA: ORGANIC PEROXIDE TYPE D, SOLID (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 5.2 (For reference only, please check.)  
IMDG: 5.2 (For reference only, please check.)  
IATA: 5.2 (For reference only, please check.)

### Packing group, if applicable

ADR/RID: (For reference only, please check.)  
IMDG: (For reference only, please check.)  
IATA: (For reference only, please check.)

### Environmental hazards

ADR/RID: No  
IMDG: No

IATA: No

**Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

**SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

## Korea Existing Chemicals List (KECL)

Listed.

### SECTION 16: Other information

#### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

#### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Disclaimer: 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. We as supplier shall not be held liable for any