

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

GHS Product identifier: Di-tert-butyl peroxide.
Other means of identification: tert-Butyl peroxide.
Recommended use of the chemical and restrictions on use: /
Supplier's details:
Emergency phone number: /



Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Flammable liquids Category 2

Organic peroxides Types E

Germ cell mutagenicity Category 2

GHS Label elements, including precautionary statements:

Symbol:



Signal word: Danger

Hazard statement(s): Highly flammable liquid and vapor. Heating may cause a fire. Suspected of causing genetic defects.

Precautionary statement(s):

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. Keep only in original container. Keep cool. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Response:

In case of fire: FOR SMALL FIRE: Use water spray, foam, CO₂ or dry chemical to extinguish. DO NOT use water jets. FOR LARGE FIRE: Flood fire area with water from a distance. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If exposed or concerned: Get medical advice/attention.

Storage:

Store in a well-ventilated place. Keep cool. Protect from sunlight. Store at temperatures not exceeding ...°C/...°F. Store separately. Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Di-tert-butyl peroxide	110-05-4	99.23%

Section 4 FIRST AID MEASURES

Description of necessary first aid measures

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

In case of skin contact: Remove contaminated clothing and rinse with plenty of running water.

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

If ingestion: Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: FOR SMALL FIRE: Water spray, foam, CO₂ or dry chemical. DO NOT use water jets. FOR LARGE FIRE: Flood fire area with water from a distance.

Special hazards arising from the chemical: Liquid and vapour are highly flammable. May explode and burn in high temperature and fire and release toxic fumes.

Special protective actions for fire-fighters: Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water courses. Consider evacuation (or protect in place). Fight fire from a safe distance, with adequate cover. Extinguishers should be used only by trained personnel. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Clean up all spills immediately. No smoking, naked lights, ignition sources. Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result. Avoid breathing dust or vapours and all contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Environmental precautions: Isolate contaminated areas and restrict access.

Methods and materials for containment and cleaning up: Minor Spills: Contain and absorb spill with dry sand, earth, inert material or vermiculite. DO NOT use sawdust as fire may result. Scoop up solid residues and seal in labelled drums for disposal. Major Spills: Contain spill with sand, earth or other clean, inert materials. NEVER use organic absorbents such as sawdust, paper, cloth; as fire may result. Avoid any contamination by organic matter. Use spark-free and explosion-proof equipment. Collect any recoverable product into labelled containers for possible recycling. DO NOT mix fresh with recovered material. Collect residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. Decontaminate equipment and launder all protective clothing before storage and re-use.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear protective masks, normal protective clothing and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

Conditions for safe storage, including any incompatibilities: Store in original containers in an original approved flammable materials storage area. Keep containers securely sealed as supplied. **WARNING:** Gradual decomposition during storage in sealed containers may lead to a large pressure build-up and subsequent explosion. No smoking, naked lights, heat or ignition sources. Store in a cool, dry, well ventilated area. Store under cover and away from sunlight. Store below safe storage (control) temperature. Always store below 35 deg.C. Store away from flammable or combustible materials, debris and waste. Contact may cause fire or violent reaction. Store away from incompatible materials. Store away from foodstuff containers. DO NOT stack on wooden floors or wooden pallets. Protect containers against physical damage. Check regularly for spills and leaks. Observe manufacturer's storage and handling recommendations contained within this SDS. Keep locked up. Restrictions may apply on quantities and to other materials permitted in the same location.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: /

Appropriate engineering controls: Close strictly and provide sufficient local exhaust.

Individual protection measures

Eye/face protection: Safety glasses with side shields. Chemical goggles.

Skin protection: Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber.

Respiratory protection: Type A-P Filter of sufficient capacity.

Thermal hazards: /

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour etc)	Colorless transparent liquid.
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	-40°C.
Initial boiling point and boiling range	/
Flash point	≤15.0°C.
Evaporation rate	/
Flammability (solid, gas)	Highly flammable
Upper/lower flammability or explosive limits	/
Vapour pressure	2.6 kPa (20°C).
Vapour density	5.
Relative density	0.8.
Solubility(ies)	Insoluble in water.
Partition coefficient: n-octanol/water	/
Auto-ignition temperature	/
Decomposition temperature	111°C.

Viscosity

/

Section 10 STABILITY AND REACTIVITY

Reactivity: /**Chemical stability:** This material is stable in normal temperature.**Possibility of hazardous reactions:** Decomposes at 111°C. This increases fire hazard. The substance is a strong oxidant. It reacts violently with combustible and reducing materials.**Conditions to avoid:** Spark, high temperature and static electricity.**Incompatible materials:** Flammable materials and reducing agents.**Hazardous decomposition products:** Oxycarbides.

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, swallowed, skin, eyes.**Symptoms related to the physical, chemical and toxicological characteristics:** /**Acute health effects:** Accidental ingestion of the material may be harmful and cause cough and throat irritation. Oral intake cause bellyache, nausea, vomit and other symptoms. This material may produce skin and eyes irritation.**Chronic health effects:** The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.**Numerical measures of toxicity(such as acute toxicity estimates):**

LD50(oral, rat): >2000 mg/kg

LC50(inhalation, rat): >4095.3219 mg/l/4H

Section 12 ECOLOGICAL INFORMATION

Toxicity:

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	0.354mg/L
EC50	48	Crustacea	>73.1mg/L
EC50	72	Algae or other aquatic plants	15mg/L
NOEC	72	Algae or other aquatic plants	1.2mg/L

Persistence and degradability: High.**Bioaccumulative potential:** Low (LogKOW = 3.448)**Mobility in soil:** Low (KOC = 725.3).**Other adverse effects:** /

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

Section 14 TRANSPORT INFORMATION

UN number: 3107.**UN proper shipping name:** ORGANIC PEROXIDE TYPE E, LIQUID.**Transport hazard class(es):** 5.2.**Packing group, if applicable:** /

Environmental hazards: /
Special precautions for user: /



Section 15 REGULATORY INFORMATION

Zhenghua Group

Regulations: This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB 18218-2009, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GA 57-1993, GB/T 15098-2008, GBZ 2.1-2007, GBZ 2.2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation [Published by the Ministry of Railways, 2008], Dangerous Chemicals Safety Administrative Regulation [Published by the State Council, 2011].

Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	17-Dec-2019

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer/supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.