

MATERIAL SAFETY DATA SHEET (MSDS)

Di-tert-butyl peroxide

Section 1 - Chemical Product and Company Identification

MSDS Name: Di-tert-butyl peroxide

Catalog Numbers: AC349930000, AC349930050, AC349931000

Synonyms: tert-Butyl peroxide; Trigonox B; DTBP.

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
110-05-4	Di-tert-butyl peroxide	99	203-733-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Not available. Flash Point: 6 deg C.

Danger! Highly flammable. Organic peroxide. Heat or contamination may cause hazardous decomposition. Peroxides and decomposition products are flammable and can ignite with explosive force if confined. May cause eye, skin, and respiratory tract irritation. The toxicological properties of this material have not been fully investigated.

Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. May be harmful if absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated. May be harmful if swallowed.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. May be harmful if inhaled.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Flammable liquid and vapor. Will be easily ignited by heat, sparks or flame. Containers may explode if exposed to fire.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: 6 deg C (42.80 deg F)

Autoignition Temperature: 165 deg C (329.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 2; Special Hazard: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid mechanical shock and friction. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from sources of ignition. Do not store near combustible materials. Store in a tightly closed container. Store in a dry area. Refrigerator/flammables. Keep away from reducing agents.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Di-tert-butyl peroxide	none listed	none listed	none listed

OSHA Vacated PELs: Di-tert-butyl peroxide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: Not available.

Odor: faint odor

pH: Not available.

Vapor Pressure: 4.27 kPa @ 20 deg C

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 109 - 110 deg C

Freezing/Melting Point:-30 deg C

Decomposition Temperature:Not available.

Solubility: Slightly soluble.

Specific Gravity/Density:0.800

Molecular Formula:C8H18O2

Molecular Weight:146.23

Section 10 - Stability and Reactivity

Chemical Stability: A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by direct contact with incompatible substances or by thermal decomposition at and above the SADT (see Section 16). SADT (Self-Accelerating Decomposition Temperature): 80 癈/176 癈.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, combustible materials.

Incompatibilities with Other Materials: Reducing agents, acids, bases, finely powdered metals, rust, heavy metals.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, acetone, methane.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 110-05-4: ER2450000

LD50/LC50:

CAS# 110-05-4:

Draize test, rabbit, eye: 500 mg/24H Mild;

Draize test, rabbit, skin: 500 mg;

Inhalation, mouse: LC50 = >4103 ppm/4H;

Inhalation, rat: LC50 = >4100 ppm/4H;

Oral, mouse: LD50 = 216.4 mg/kg;

Oral, rat: LD50 = >25 gm/kg;

Carcinogenicity:

CAS# 110-05-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ORGANIC PEROXIDE TYPE E, LIQUID	ORGANIC PEROXIDE TYPE E, LIQUID (DI-TERT-BUTYL PEROXIDE)
Hazard Class:	5.2	5.2
UN Number:	UN3107	UN3107
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 110-05-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 110-05-4 is considered highly hazardous by OSHA.

STATE

CAS# 110-05-4 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

O F

Risk Phrases:

R 11 Highly flammable.
R 7 May cause fire.

Safety Phrases:

- S 16 Keep away from sources of ignition - No smoking.
- S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- S 14A Keep away from acids, reducing agents and polymerisation catalysts.
- S 3/7 Keep container tightly closed in a cool, well-ventilated place

WGK (Water Danger/Protection)

CAS# 110-05-4: 1

Canada - DSL/NDSL

CAS# 110-05-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, F, C.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 7/26/2000

Revision #4 Date: 9/26/2007

Disclaimer:

SUNIVO provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.
