

Material Safety Data Sheet

tert-Butyl cumyl peroxide

ACC# 02916

Section 1 - Chemical Product and Company Identification

MSDS Name: tert-Butyl cumyl peroxide

Catalog Numbers: AC349910000, AC349911000, AC349915000

Synonyms: Trigonox T; cross-linking peroxide; organic peroxide; polymer initiator.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
3457-61-2	tert-Butyl cumyl peroxide	94	222-389-8
98-82-8	Cumene	2.5	202-704-5
98-83-9	alpha-Methyl styrene	2.5	202-705-0
98-86-2	Acetophenone	1	202-708-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear almost colorless liquid. Flash Point: 72 deg C.

Warning! Organic peroxide. Heat or contamination may cause hazardous decomposition. Peroxides and decomposition products are flammable and can ignite with explosive force if confined. Causes severe skin irritation. **Combustible liquid and vapor.** May cause eye and respiratory tract irritation.

Target Organs: Skin.

Potential Health Effects

Eye: May cause eye irritation.

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

Ingestion: May be harmful if swallowed. May cause severe irritation of the mouth and throat.

Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.

Chronic: Chronic exposure may cause effects similar to those of acute exposure.

Section 4 - First Aid Measures

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

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid. 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. Strong oxidizer. Contact with other material may cause fire.

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

Flash Point: 72 deg C (161.60 deg F)

Autoignition Temperature: > 400 deg C (> 752.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

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

Section 6 - Accidental Release Measures

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

Spills/Leaks: Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Provide ventilation. Use only non-sparking tools and equipment. Prevent runoff from entering drains, sewers, or streams.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep away from heat and flame. Avoid breathing vapor or mist.

Storage: Store in a tightly closed container. Keep away from reducing agents. Store below 40°C.

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
tert-Butyl cumyl peroxide	none listed	none listed	none listed
Cumene	50 ppm TWA	50 ppm TWA; 245 mg/m ³ TWA 900 ppm IDLH	50 ppm TWA; 245 mg/m ³ TWA
alpha-Methyl styrene	50 ppm TWA; 100 ppm STEL	50 ppm TWA; 240 mg/m ³ TWA 700 ppm IDLH	100 ppm Ceiling; 480 mg/m ³ Ceiling
Acetophenone	10 ppm TWA	none listed	none listed

OSHA Vacated PELs: tert-Butyl cumyl peroxide: No OSHA Vacated PELs are listed for this chemical. Cumene: 50 ppm TWA; 245 mg/m³ TWA alpha-Methyl styrene: 50 ppm TWA; 240 mg/m³ TWA Acetophenone: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

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: Liquid

Appearance: clear almost colorless

Odor: pungent odor

pH: Not available.

Vapor Pressure: 14 mm Hg @ 20 deg C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: 4 mPa.s 20 deg C

Boiling Point: Not available.

Freezing/Melting Point: 5 - 8 deg C

Decomposition Temperature: Not available.

Solubility: Immiscible.

Specific Gravity/Density: 0.940

Molecular Formula: C₁₃H₂₀O₂

Molecular Weight: 208.3

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 (Self-Accelerating Decomposition Temp). SADT = 80°C. This product is stable at ambient temperatures but may decompose if exposed to temperatures above 167°F (75°C).

Conditions to Avoid: Ignition sources, excess heat, contamination.

Incompatibilities with Other Materials: Strong oxidizing agents, reducing agents, strong acids, strong bases, heavy metals, polymerization catalysts.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 3457-61-2 unlisted.

CAS# 98-82-8: GR8575000

CAS# 98-83-9: WL5075300

CAS# 98-86-2: AM5250000

LD50/LC50:

Not available.

CAS# 98-82-8:

Draize test, rabbit, eye: 86 mg Mild;

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

Draize test, rabbit, skin: 100 mg/24H Moderate;

Inhalation, mouse: LC50 = 10 gm/m³/7H;

Inhalation, mouse: LC50 = 15300 mg/m³/2H;
Inhalation, mouse: LC50 = 10000 mg/m³/7H;
Inhalation, rat: LC50 = 39000 mg/m³/4H;
Oral, mouse: LD50 = 12750 mg/kg;
Oral, rat: LD50 = 1400 mg/kg;
Oral, rat: LD50 = 2.9 gm/kg;
Skin, rabbit: LD50 = 12300 uL/kg;

CAS# 98-83-9:

Draize test, rabbit, eye: 91 mg Mild;
Draize test, rabbit, skin: 100% Moderate;
Oral, mouse: LD50 = 4500 mg/kg;
Oral, mouse: LD50 = 50000 mg/kg;
Oral, rat: LD50 = 4900 mg/kg;

CAS# 98-86-2:

Dermal, guinea pig: LD50 = >20 mL/kg;
Draize test, rabbit, eye: 750 ug Severe;
Inhalation, mouse: LC50 = 1200 mg/m³/4H;
Oral, mouse: LD50 = 740 mg/kg;
Oral, mouse: LD50 = 1250 mg/kg;
Oral, rat: LD50 = 815 mg/kg;
Oral, rat: LD50 = 2650 mg/kg;
Skin, rabbit: LD50 = 15900 uL/kg;

Oral LD50 (rat) for tert-butyl cumyl peroxide is 4920 mg/kg. The dermal LD50 (rabbit) for tert-butyl cumyl peroxide is not available. It is a severe skin irritant (24 hour exposure) when tested on rabbit skin. For tert-butyl cumyl peroxide, the LC50 (rat) is > 140 ppm. Prolonged or repeated skin contact may result in irritation with redness. This product did not produce irritation when tested in rabbit eyes. (Akzo Nobel).

Carcinogenicity:

CAS# 3457-61-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 98-82-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 98-83-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 98-86-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: Do not empty into drains.

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:

CAS# 98-82-8: waste number U055 (Ignitable waste).

CAS# 98-86-2: waste number U004.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ORGANIC PEROXIDE TYPE D, LIQUID	ORGANIC PEROXIDE TYPE D, LIQUID
Hazard Class:	5.2	5.2
UN Number:	UN3105	UN3105
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 3457-61-2 is listed on the TSCA inventory.

CAS# 98-82-8 is listed on the TSCA inventory.

CAS# 98-83-9 is listed on the TSCA inventory.

CAS# 98-86-2 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 98-82-8: Effective 12/28/84, Sunset 12/28/94 CAS# 98-83-9: Effective 6/1/87, Sunset 11/9/93

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

CAS# 98-82-8: 5000 lb final RQ; 2270 kg final RQ CAS# 98-86-2: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 98-82-8: immediate, fire, reactive.

CAS # 98-83-9: immediate, fire, reactive.

CAS # 98-86-2: immediate, fire.

Section 313

This material contains Cumene (CAS# 98-82-8, 2.5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Acetophenone is not at a high enough concentration to be reportable under Section 313.

Clean Air Act:

CAS# 98-82-8 is listed as a hazardous air pollutant (HAP).

CAS# 98-86-2 is listed as a hazardous air pollutant (HAP).

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:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 3457-61-2 can be found on the following state right to know lists: New Jersey.

CAS# 98-82-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 98-83-9 can be found on the following state right to know lists: California, New Jersey, Minnesota, Massachusetts.

CAS# 98-86-2 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, 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:

XI O N

Risk Phrases:

R 38 Irritating to skin.

R 7 May cause fire.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

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 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

S 3/7 Keep container tightly closed in a cool, well-ventilated place.

WGK (Water Danger/Protection)

CAS# 3457-61-2: 2

CAS# 98-82-8: 1

CAS# 98-83-9: 2

CAS# 98-86-2: 1

Canada - DSL/NDSL

CAS# 98-82-8 is listed on Canada's DSL List.

CAS# 98-83-9 is listed on Canada's DSL List.

CAS# 98-86-2 is listed on Canada's DSL List.

CAS# 3457-61-2 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B, D1B, B3.

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

CAS# 98-82-8 is listed on the Canadian Ingredient Disclosure List.

CAS# 98-83-9 is listed on the Canadian Ingredient Disclosure List.

CAS# 98-86-2 is listed on the Canadian Ingredient Disclosure List.

MSDS Creation Date: 7/25/2000
Revision #2 Date: 1/07/2005

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