

Material Safety Data Sheet

2,2-Di(tert-butyperoxy)butane, 50% solution in aromatic free mineral spirit

ACC# 02926

Section 1 - Chemical Product and Company Identification

MSDS Name: 2,2-Di(tert-butyperoxy)butane, 50% solution in aromatic free mineral spirit

Catalog Numbers: AC349830000, AC349830100, AC349835000

Synonyms: Di-tert-butyl sec-butyldene diperoxide

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
2167-23-9	2,2-Di(tert-butyperoxy)butane	48-52	218-507-2
31807-55-3	Isododecane	43%	250-816-8
78-93-3	Methyl ethyl ketone	4%	201-159-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear liquid. Flash Point: 43 deg C.

Danger! Organic peroxide. Heat or contamination may cause hazardous decomposition. Peroxides and decomposition products are flammable and can ignite with explosive force if confined. Causes eye, skin, and respiratory tract irritation. Breathing vapors may cause drowsiness and dizziness. **Combustible liquid and vapor.**

Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

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

Ingestion: May cause irritation of the digestive tract.

Inhalation: Causes respiratory tract irritation. May be harmful if inhaled. May cause nausea, dizziness, and headache.

Chronic: Prolonged or repeated skin contact may cause dermatitis.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately. 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. Will burn if involved in a fire. Flammable liquid and vapor.

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

Flash Point: 43 deg C (109.40 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

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. Remove all sources of ignition. Use a spark-proof tool.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Avoid breathing vapor or mist. **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. Do not exceed 30°C (86°F).

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
2,2-Di(tert-butylperoxy)butane	none listed	none listed	none listed
Isododecane	none listed	none listed	none listed
Methyl ethyl ketone	200 ppm TWA; 300 ppm STEL	200 ppm TWA; 590 mg/m ³ TWA 3000 ppm IDLH	200 ppm TWA; 590 mg/m ³ TWA

OSHA Vacated PELs: 2,2-Di(tert-butylperoxy)butane: No OSHA Vacated PELs are listed for this chemical. Isododecane: No OSHA Vacated PELs are listed for this chemical. Methyl ethyl ketone: 200 ppm TWA; 590 mg/m³ TWA

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

Odor: faint odor

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: 2.16 mPa.s 20 deg C

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: Immiscible.

Specific Gravity/Density: 0.805

Molecular Formula: C₁₂H₂₆O₄

Molecular Weight: 234.34

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).

Conditions to Avoid: Ignition sources.

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, strong acids, strong bases.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 2167-23-9 unlisted.

CAS# 31807-55-3 unlisted.

CAS# 78-93-3: EL6475000

LD50/LC50:

Not available.

Not available.

CAS# 78-93-3:

Draize test, rabbit, eye: 80 mg;
Draize test, rabbit, skin: 500 mg/24H Moderate;
Draize test, rabbit, skin: 402 mg/24H Mild;
Inhalation, mouse: LC50 = 32 gm/m³/4H;
Inhalation, rat: LC50 = 23500 mg/m³/8H;
Oral, mouse: LD50 = 3000 mg/kg;
Oral, rat: LD50 = 2737 mg/kg;
Skin, rabbit: LD50 = 6480 mg/kg;

Carcinogenicity:

CAS# 2167-23-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 31807-55-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 78-93-3: 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

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:

CAS# 78-93-3: waste number U159 (Ignitable waste, Toxic waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ORGANIC PEROXIDE TYPE C, LIQUID	ORGANIC PEROXIDE TYPE C, LIQUID
Hazard Class:	5.2	5.2
UN Number:	UN3103	UN3103
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 2167-23-9 is listed on the TSCA inventory.

CAS# 31807-55-3 is listed on the TSCA inventory.

CAS# 78-93-3 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 78-93-3: Effective 10/4/82, Sunset 10/4/92

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# 78-93-3: 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 # 78-93-3: immediate, delayed, fire.

Section 313

This material contains Methyl ethyl ketone (CAS# 78-93-3, 4%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 78-93-3 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

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# 2167-23-9 can be found on the following state right to know lists: New Jersey.

CAS# 31807-55-3 can be found on the following state right to know lists: New Jersey.

CAS# 78-93-3 can be found on the following state right to know lists: California, 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

Risk Phrases:

R 10 Flammable.

R 36/38 Irritating to eyes and skin.

R 7 May cause fire.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

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WGK (Water Danger/Protection)

CAS# 2167-23-9: No information available.

CAS# 31807-55-3: 1

CAS# 78-93-3: 1

Canada - DSL/NDSL

CAS# 78-93-3 is listed on Canada's DSL List.

CAS# 2167-23-9 is listed on Canada's NDSL List.

CAS# 31807-55-3 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of C, F, D2B, 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# 78-93-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/26/2000

Revision #2 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.