

1 PRODUCT AND COMPANY IDENTIFICATION**Organic Peroxides**

2000 Market Street

Philadelphia, Pa 19103

Information Telephone Numbers

Customer Service

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(303) 623-5716 (24Hrs)

Phone Number

1-800-558-5575

Available Hrs

Business Hours

Product Name LUPEROX 256

Product Synonym(s) Formerly LUPERSOL 256

Chemical Family Organic Peroxides-Peroxyesters

Chemical Formula

Chemical Name 2,5-Dimethyl-2,5-di-(2-ethylhexanoylperoxy)hexane

EPA Reg Num

Product Use Polymerization Initiator

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy) hexane	13052-09-0	> 90%	Y
Impurities including:			N
3,3,6,6-Tetramethyl-1,2-dioxacyclohexane	22431-89-6	< 2%	Y
2,5-Dimethylhexane-2,5-dihydroperoxide	3025-88-5	< 2%	Y
Hexane	110-54-3	< 1%	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are either on the TSCA Inventory list or exempt as impurities.

3 HAZARDS IDENTIFICATION**Emergency Overview**

Colorless liquid, slight mint odor

WARNING!

ORGANIC PEROXIDE

THERMALLY UNSTABLE - REFRIGERATION REQUIRED

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. On the basis of available information, exposure to this material is not expected to produce significant adverse human health effects; however, use of appropriate good industrial hygiene and safety precautions to control exposure is recommended when handling or using this material.

4 FIRST AID MEASURES

IN CASE OF CONTACT, flush the area with plenty of water. Remove material from clothing. Wash clothing before reuse.

IF SWALLOWED, induce vomiting as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air.

5 FIRE FIGHTING MEASURES**Fire and Explosive Properties**

Auto-Ignition Temperature	NE		
Flash Point	49 C / 120 F	Flash Point Method	Seta CC
Flammable Limits- Upper	NE		
Lower	NE		

Extinguishing Media

Use water spray, foam or dry chemical.

Fire Fighting Instructions

Fight fire with large amounts of water from a safe distance. Use water spray to cool containers exposed to fire. Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use. After a fire, wait until the material has cooled to room temperature before initiating clean up activities.

Fire and Explosion Hazards

Contact with incompatible materials or exposure to temperatures exceeding the SADT may result in a self accelerating decomposition reaction with release of flammable vapors which may autoignite.

6 ACCIDENTAL RELEASE MEASURES**In Case of Spill or Leak**

Use inert, non-combustible absorbant material. Sweep or scoop up using non-sparking tools. Wet down and dispose of immediately. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

7 HANDLING AND STORAGE

Handling

Contact with incompatible materials or exposure to temperatures exceeding SADT (See Section (9)) may result in a self accelerating decomposition reaction with release of flammable vapors which may autoignite. Keep away from heat sparks and flame. Avoid contamination. Use only with adequate ventilation. Use explosion proof equipment. Keep container closed. Do not reuse container as it may retain hazardous product residue. Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing. Wash thoroughly after handling. Minimize exposure to ambient temperatures.

Storage

REFRIGERATION REQUIRED. Detached storage is preferred. Keep out of direct sunlight. Store away from combustibles and incompatible materials. Refer also to National Fire Protection Agency (NFPA) Code 432, Code for the Storage of Organic Peroxide Formulations. Minimize exposure to ambient temperatures. To maintain stability and active oxygen content, store below 16 C (60 F).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Use good industrial practice to avoid eye contact.

Skin Protection

Minimize skin contamination by following good industrial hygiene practice. Wearing rubber gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit	Value
Hexane	
ACGIH Skin designator	Y
ACGIH TWA	50 ppm 176 mg/m ³
OSHA TWA PEL	500 ppm 1800 mg/m ³

- Only those components with exposure limits are printed in this section.
- Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
- ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
- WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Colorless liquid, slight mint odor
pH	NE
Specific Gravity	0.928-0.950 @ 25 C
Vapor Pressure	2.0
Vapor Density	NE
Melting Point	<-4 C
Freezing Point	NE
Boiling Point	ne
Solubility In Water	0.17 mg/g
Evaporation Rate	NE
Percent Volatile	NE
SADT	40 C/104 F (35 lb ctn.)

This material is chemically unstable and should only be handled under specified conditions. See HANDLING AND STORAGE section of this MSDS for specified conditions.

SADT - Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction. This reaction will generate flammable vapors which may autoignite. The length of time to generated a decomposition reaction, after the SADT has been reached or exceeded, is dependent upon how much the SADT has been exceeded and the length of time needed for the reaction exotherm (heat spike from increasing decomposition rate) to initiate a rapid decomposition reaction. Typically, SADT is inversely proportional to package size. Larger packages will have a lower SADT due to smaller ratio to heat transfer area to volume of product.

Other Physical Data

Active Oxygen Content = 6.7% min.

10 STABILITY AND REACTIVITY**Stability**

This material is chemically unstable and should only be handled under specified conditions. See HANDLING AND STORAGE section of this MSDS for specified conditions.

SADT - Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction. This reaction will generate flammable vapors which may autoignite. The length of time to generated a decomposition reaction, after the SADT has been reached or exceeded, is dependent upon how much the SADT has been exceeded and the length of time needed for the reaction exotherm (heat spike from increasing decomposition rate) to initiate a rapid decomposition reaction. Typically, SADT is inversely proportional to package size. Larger packages will have a lower SADT due to smaller ratio to heat transfer area to volume of product.

Hazardous Polymerization

Does not occur.

Incompatibility

Contact with foreign materials, such as, strong acids, alkalis, oxidizers, reducing agents, amines, and promoters/accelerators may result in a violent decomposition reaction or in product degradation.

Hazardous Decomposition Products

Temperatures at or above the SADT can result in the release of hazardous decomposition products which are flammable and may autoignite.

11 TOXICOLOGICAL INFORMATION**Toxicological Information**

Data on this material and/or its components are summarized below.

2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy) hexane

Single exposure (acute) studies indicate that this material is practically non-toxic if swallowed (rat LD50 >12,918 mg/kg), absorbed through skin (rabbit LD50 >8,000 mg/kg) or inhaled (rat 4-hr LC50 >800 mg/l) and practically non-irritating to rabbit eyes (1.4/110) and skin (4-hr exposure, 0.8/8.0; similar material).

2,5-Dimethylhexane-2,5-dihydroperoxide

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 2,356 mg/kg), no more than slightly toxic to rats if absorbed through skin (LD50 >2,000 mg/kg), practically non-irritating to rabbit skin (0.9/8.0), and corrosive to rabbit eyes.

12 ECOLOGICAL INFORMATION**Ecotoxicological Information**

No data are available.

Chemical Fate Information

No data are available.

13 DISPOSAL CONSIDERATIONS
Waste Disposal

Dispose of in accordance with federal, state and local regulations. Dilution followed by incineration is the preferred method. Dilution ration of 10:1 in a clean, compatible, combustible solvent (i.e., Fuel Oil #2, mineral oil) will reduce reactivity hazard during incineration and transportation.

14 TRANSPORT INFORMATION

DOT Name	Organic Peroxide Type C, Liquid, Temperature Controlled
DOT Technical Name	[2,5-Dimethyl-2,5-di-(2-Ethylhexanoylperoxy) Hexane, <= 100%]
DOT Hazard Class	5.2
UN Number	3113
DOT Packing Group	PG II
RQ	
DOT Special Information	DOT Control Temperature = 20 C DOT Emergency Temperature = 25 C

15 REGULATORY INFORMATION
Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	N	Fire	Y
Delayed (Chronic) Health	N	Reactive	Y
		Sudden Release of Pressure	N

The components of this product are either on the TSCA Inventory list or exempt as impurities.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Hexane	5000 LBS	
3,3,6,6-Tetramethyl-1,2-dioxacyclohexane	NE	
2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy) hexane	NE	
2,5-Dimethylhexane-2,5-dihydroperoxide	NE	

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Ammendments and Reauthorization Act of 986 and 40 CFR Part 372. See Section 2

Hexane

Massachusetts Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Hexane

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy) hexane

2,5-Dimethylhexane-2,5-dihydroperoxide

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Hexane

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Hexane

16 OTHER INFORMATION**Revision Information**

Revision Date	12 JUN 2002	Revision Number	6
Supersedes Revision Dated	11-JUN-2002		

Revision Summary

Section 14 Update

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

Back-up emergency refrigeration should be available in case primary refrigeration is lost. Emergency dry ice source(s) should be known in case of refrigeration failure. Temperature in storage areas should be monitored. Refrigeration systems should have high temperature alarms to warn of loss of refrigeration.

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