

**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 665M50

Product Synonym(s)

Chemical Family Organic Peroxide - Peroxyester

Chemical Formula

Chemical Name 1,1-Dimethyl-3-Hydroxy-Butyl Peroxy-2-Ethylhexanoate in OMS

EPA Reg Num

Product Use Polymerization Initiator

**2 COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
3-Hydroxy-1,1-dimethylbutyl peroxy (2-ethylhexanoate)	95732-35-7	50%	Y
Petroleum distillate	64742-48-9	< 25%	Y
Odorless mineral spirits	64741-65-7	< 25%	Y
Impurities including:			N
Di (3-hydroxy-1,1-dimethylbutyl) peroxide	93002-36-9	< 2%	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA 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**

Pale yellow liquid

DANGER!

ORGANIC PEROXIDE

THERMALLY UNSTABLE - REFRIGERATION REQUIRED

MAY CAUSE RESPIRATORY TRACT IRRITATION.

PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

**Potential Health Effects**

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be practically non-toxic if swallowed, no more than slightly toxic if

absorbed through skin and slightly irritating to skin. Prolonged or repeated contact may remove oils from the skin and may dry skin and cause irritation, redness and rash. High vapor concentrations may be irritating to the eyes and respiratory tract, and may result in central nervous system (CNS) effects such as headache, dizziness, nausea, drowsiness and, in severe exposures, loss of consciousness and death. Mild to severe lung injury may occur if this material is drawn into the lungs (aspirated) during swallowing, or during vomiting after swallowing. Symptoms of injury may include increased breathing and heart rate, coughing and related signs of respiratory distress.

#### 4 FIRST AID MEASURES

IN CASE OF CONTACT, flush the area with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops and persists. Thoroughly clean shoes before reuse.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If breathing is difficult, get medical attention.

#### 5 FIRE FIGHTING MEASURES

##### Fire and Explosive Properties

Auto-Ignition Temperature	NE		
Flash Point	48 C	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****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. Avoid breathing vapor or mist. Avoid contact with 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 0 C (32 F).

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering Controls**

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposures. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

**Eye / Face Protection**

Use good industrial practice to avoid eye contact.

**Skin Protection**

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash 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

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**

The components of this product have no established Airborne Exposure Guidelines

- 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.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance/Odor	Pale yellow liquid
pH	NE
Specific Gravity	0.8583 @ 15 C
Vapor Pressure	NE
Vapor Density	NE
Melting Point	< - 50 C
Freezing Point	NE
Boiling Point	NA
Solubility In Water	Insoluble
Evaporation Rate	NE
SADT	55 C/ 131 F ( 7 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 = 3.07 %

**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, bases, and oxidizers, reducing agents, amines and 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.

**Odorless Mineral Spirits**

No skin allergy was observed in humans following repeated exposure, although skin irritation was noted. No symptoms associated with solvent exposure were noted by human volunteers exposed to 100 ppm odorless mineral spirit for 6 hours. Repeated inhalation studies in rats produced kidney tubule damage in male rats only indicative of hydrocarbon nephropathy, but extensive studies have demonstrated that these effects occur only in male rats and are not relevant to humans. Repeated skin application of one type of odorless mineral spirits has produced skin tumors in mice. These solvents have not been shown to be developmental toxicants, and generally produced no genetic changes in standard tests using bacteria and animals.

**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 [ 1,1-Dimethyl-3-hydroxybutylperoxy-2-ethylhexanoate, <= 52 % ]  
 DOT Hazard Class 5.2  
 UN Number 3113  
 DOT Packing Group PG II  
 RQ  
 DOT Special Information Emergency Temperature: 40 C  
 Control Temperature: 30 C

SAMPLE  
 49 CFR 173.225(c)(2) Sample Provision; Packing Method OP2

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

Immediate (Acute) Health	Y	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
Petroleum distillate	NE	
Odorless mineral spirits	NE	
Di (3-hydroxy-1,1-dimethylbutyl) peroxide	NE	NE
3-Hydroxy-1,1-dimethylbutyl peroxy (2-ethylhexanoate)	NE	NE

**16 OTHER INFORMATION**

**Revision Information**

Revision Date                      01 AUG 2000                      Revision Number 1  
Supercedes Revision Dated

**Revision Summary**

R&D Product

**Key**

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

**Miscellaneous**

Luperox is a registered trade mark of ATOFINA Chemicals, Inc.

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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