



1 PRODUCT AND COMPANY IDENTIFICATION

Functional Additives

2000 Market Street
21st Floor
Philadelphia, PA 19103-3222

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service Number	(800) 331-7654	8:00 AM - 5:00 PM EST

Product Name LUPEROX 11M75
Product Synonym(s)
Chemical Family Organic Peroxide - Peroxyester
Chemical Formula
Chemical Name Tert-butyl peroxy-pivalate, 75% in OMS
EPA Reg Num
Product Use Polymerization Initiator

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
tert-Butyl peroxy-pivalate	927-07-1	75% By Wt.	Y
Petroleum distillate	64742-48-9	<or= 25% By Wt.	Y
Odorless mineral spirits	64741-65-7	<or= 25% By Wt.	Y
Di-tert-butyl peroxide	110-05-4	<or= 0.2% By Wt.	Y
tert-Butyl hydroperoxide	75-91-2	<or= 0.2% By Wt.	Y

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

Pale yellow liquid; Sharp sweet odor.

DANGER!
ORGANIC PEROXIDE
THERMALLY UNSTABLE - REFRIGERATION REQUIRED
CAUSES SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
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 slightly toxic if swallowed or absorbed through skin, practically non-toxic if inhaled, slightly irritating to eyes and severely irritating to skin. Repeated exposure may cause an allergic skin reaction. Prolonged or repeated contact removes 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, immediately flush the area with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

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	>38	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 such as sodium bicarbonate, sodium carbonate, calcium carbonate, clean sand or non-acidic clay directly on the spilled peroxide, then wet down (dampen) the mixture with water. Sweep or scoop up using non-sparking tools and place into a polyethylene bag for disposal. The sweepings should be wetted down further with water. Dispose of immediately. After all of the material has been collected, wash down the area with detergent and water. Consult a regulatory specialist to determine

6 ACCIDENTAL RELEASE MEASURES

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 between 0 F (-18 C) and 32 F (0 C).

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

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.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

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

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.
- 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	Pale yellow liquid; Sharp sweet odor.
pH	NE
Specific Gravity	0.85 @ 25 C
Vapor Pressure	4.5 mm Hg @ 40 F
Vapor Density	NE
Melting Point	NE
Freezing Point	-19 C (-2 F)
Boiling Point	NE (Decomposes)
Solubility In Water	Insoluble
Percent Volatile	100
SADT	29 C/85 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 = 6.89%

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 accelerators/promoters 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.

tert-Butyl peroxyvalate

Single exposure (acute) studies indicate that this material is slightly toxic if swallowed (rat LD50 4,169-4,300 mg/kg) or absorbed through skin (rabbit LD50 2,500 mg/kg), practically non-toxic if inhaled (rat 4-hr LC50 7.79 mg/l), slightly irritating to rabbit eyes and severely irritating to rabbit skin (4-hr exposure; 4.66/8.0).

Skin allergy was observed in guinea pigs following repeated exposure. No toxic effects were noted in rats following repeated inhalation. Genetic changes were observed in standard tests using bacteria; however, no genetic changes were observed using animals.

Petroleum distillate/Odorless mineral spirits

No skin allergy was observed in guinea pigs or humans following repeated exposure, although skin irritation was noted. Human volunteers exposed to 100 ppm for 6 hours noted no symptoms associated with exposure. 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 inhalation exposure in dogs produced no adverse effects. Repeated skin application of these types of materials has produced skin tumors in mice. No birth defects were observed in the offspring of rats following inhalation exposure during pregnancy. No genetic changes were observed in tests using bacteria, animal cells or animals.

12 ECOLOGICAL INFORMATION

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 ratio 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	[tert-butyl peroxy pivalate, >67-77%]
DOT Hazard Class	5.2
UN Number	UN 3113
DOT Packing Group	PG II
RQ	
DOT Special Information	DOT Control Temperature = 0 C DOT Emergency Temperature = 10 C

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	
Di-tert-butyl peroxide	NE	NE
tert-Butyl hydroperoxide	NE	NE
Odorless mineral spirits	NE	
tert-Butyl peroxy pivalate	100 LBS	

Massachusetts Right to Know

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

Di-tert-butyl peroxide



Massachusetts Right to Know

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

- tert-Butyl hydroperoxide
- tert-Butyl peroxyvalate

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.

- Di-tert-butyl peroxide
- tert-Butyl hydroperoxide
- tert-Butyl peroxyvalate

Pennsylvania Right to Know

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

- Di-tert-butyl peroxide
- tert-Butyl hydroperoxide
- tert-Butyl peroxyvalate

16 OTHER INFORMATION

Revision Information

Revision Date 02 JAN 2007 Revision Number 12
Supersedes Revision Dated 02-JAN-2007

Revision Summary

This product has been moved to the Functional Additives business unit.

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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