LUPEROX ATC50

Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Organic Peroxides
2000 Market Street

Philadelphia, Pa 19103

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	1-800-558-5575	Business Hours

Product Name	LUPEROX ATC50
Product Synonym(s)	
Chemical Family	Diacyl Peroxide
Chemical Formula	
Chemical Name	Dibenzoyl Peroxide Blend
EPA Reg Num	
Product Use	Polymerization Initiator

SCHIBLEY CHEMICAL CO., INC.
1570 Lowell Street
P.O. Box 1750
Elyria, OH 44036-1750
Phone: (440) 322-1350
Fax: (440) 322-1430

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Dibenzoyl peroxide	94-36-0	50% By Wt.	Y
Tricresyl phosphate	1330-78-5	48% By Wt.	Y
Silane, dichlorodimethyl-, reaction products with silica	68611-44-9	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 all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview
White paste; Faint to no odor

WARNING!
ORGANIC PEROXIDE
CAUSES EYE IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS BASED ON ANIMAL DATA

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on its composition, it is anticipated to be severely irritating to the eyes and non-irritating to skin. Repeated or prolonged contact may cause an allergic skin reaction. A component of this material may be absorbed through the skin in toxic amounts producing delayed neurological effects such as pain and numbness in the lower extremities, nerve damage, muscle weakness, spasticity or muscle jerks and, in severe exposures, paralysis of the lower extremities. If swallowed, this material may cause gastrointestinal distress with nausea, vomiting and diarrhea and delayed neurological effects as noted above. Animal studies indicate that repeated exposure may cause reproductive effects including damage to

the testes and reduced fertility.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes 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	NA	Flash Point Method
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 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

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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. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Do not reuse container as it may retain hazardous product residue.

Storage

Store below 38 C/100 F to maintain stability and active oxygen content. Detached storage is preferred. Store out of direct sunlight in a cool well-ventilated place. 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.

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

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

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

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for a 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
Dibenzoyl peroxide		
ACGIH TWA	-	5 mg/m3
OSHA TWA PEL	-	5 mg/m3

-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	White paste; Faint to no odor
pH	NE
Specific Gravity	NE
Vapor Pressure	NE
Vapor Density	NE
Melting Point	NE
Freezing Point	NE
Boiling Point	NE
Solubility In Water	NE
Viscosity	50,000 cps
Bulk Density	1.235 g/ml
SADT	NE (> 50 C)

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 = 3.30%

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.

Hazardous Polymerization

Does not occur.

Incompatibility

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

Hazardous Decomposition Products

Temperatures at or above the SADT can result in the relese 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.

Dibenzoyl peroxide
Single exposure (acute) studies indicate that this material is slightly toxic to practically non-toxic if swallowed (rat LD50 >950 to >5,000 mg/kg), practically non-toxic if inhaled (rat 4-hr LC50 >22.4 mg/l, nominal concentration; the highest atmospheric concentration achievable in the study), severely irritating to rabbit eyes and non-irritating to rabbit skin (4-hr exposure).

11 TOXICOLOGICAL INFORMATION

Skin allergy was observed in humans and guinea pigs following repeated skin exposure. Long-term dietary administration to rats showed an increased incidence of testicular atrophy. Long-term skin application or dietary administration studies in rats and mice produced no evidence of carcinogenicity. However, repeated long-term skin application along with a known carcinogen has enhanced skin tumor production in mice. The International Agency for Research on Cancer (IARC) has evaluated this material and determined that it is "unclassifiable as to its carcinogenicity to humans" (Group 3). No genetic changes were observed in standard tests using animals or bacteria. Both positive and negative responses occurred in tests with animal cells.

Tricresyl phosphate
Single exposure (acute) studies indicate that this material is practically non-toxic if swallowed (rat LD50 5,190 mg/kg) or absorbed through skin (rabbit LD50 >7,900 mg/kg).

Dermatitis, but not allergic skin reactions, has been observed in humans. The primary target organs for this material's (mixed isomers) toxicity are the nervous and reproductive systems. Although the severity of nervous system toxicity depends on the amount of ortho- isomer present, nervous system effects have been observed in animals following exposure to mixed isomers containing undetectable amounts (<0.1%) of ortho- isomer. Gastrointestinal irritation including nausea, vomiting and diarrhea has been observed following single oral exposure. Early signs of neurotoxicity are soreness or weakness of the leg muscles, which may progress to partial or complete paralysis after several weeks. Nerve damage including degeneration of the myelin sheath has been observed in the peripheral nerves and long spinal tracts. Although complete recovery from neurotoxic effects is often seen, the adverse neurological effects may persist for many years and include spasticity of legs and weakness in the hands.

Repeated oral treatment of rats and mice with mixed isomers produced adverse effects on the ovaries, testes and adrenal cortex. Adverse reproductive effects have been observed in rats and mice including reduced fertility, litter size, number of live-born pups and pup weight. Decreased testicular weight, sperm count and sperm motility and increased abnormal sperm were observed in males, while ovarian abnormalities, reduced litter size and lowered fertility were observed in females. Long-term administration of mixed isomers in the diet of mice and rats produced no evidence of carcinogenicity. Mixed isomers produced no genetic changes in tests using bacteria or animal cells.

Silane, dichlorodimethyl-, reaction products with silica
Single exposure (acute) studies indicate that this material is practically non-toxic if swallowed (rat LD0 5,000 mg/kg), no more than slightly toxic if inhaled (rat 4-hr LC0 0.477 mg/l; maximum attainable concentration), and non-irritating to rabbit eyes and skin.

Repeated inhalation exposure produced adverse effects in the lungs of rats. No significant adverse effects were observed following repeated oral exposure in rats. Long-term oral exposure produced no increase in tumors in rats. No adverse reproductive effects were observed in rats following oral exposure for 2 generations. No genetic changes were observed in tests using bacteria.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

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

Dibenzoyl peroxide
This material is highly toxic to Daphnia magna (48-hr EC50 0.07 mg/l) and algae (72-hr EC50 0.83 mg/l). It is moderately toxic to guppies (96-hr LC50 2.0 mg/l) and slightly toxic to activated sludge (30-min EC50 35 mg/l).

Tricresyl phosphate
This material is moderately toxic to Daphnia magna (LC50 5.6 mg/l), killifish (LC50 5.8 mg/l), flagfish (LC50 5.0

12 ECOLOGICAL INFORMATION

mg/l), medaka (LC50 4.9 mg/l), guppy (LC50 4.0-5.5 mg/l) and zebrafish (LC50 >1.0 mg/l). It is highly toxic to channel catfish (LC50 0.8 mg/l) and stickleback (LC50 0.51 mg/l).

Silane, dichlorodimethyl-, reaction products with silica
This material is practically non-toxic to zebrafish (96-hr NOEC >10,000 mg/l) and Daphnia magna (24-hr NOEC >10,000 mg/l).

Chemical Fate Information

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

Dibenzoyl peroxide
This material is biodegradable under aerobic conditions (60% after 28-days) and has a low potential to bioaccumulate (log Pow 1.87). It is degraded in air by OH radicals (half-life 54-hrs).

Tricresyl phosphate
This material is readily biodegradable in natural waters.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations.

14 TRANSPORT INFORMATION

DOT Name	Organic Peroxide Type E, Solid
DOT Technical Name	[Dibenzoyl Peroxide (as a paste) , <=52%]
DOT Hazard Class	5.2
UN Number	UN 3108
DOT Packing Group	PG II
RQ	
DOT Special Information	Packing method - OP8

15 REGULATORY INFORMATION

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

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

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Dibenzoyl peroxide	NE	
Silane, dichlorodimethyl-, reaction products with silica	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 Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2
Dibenzoyl peroxide

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

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.
Dibenzoyl peroxide
Tricresyl phosphate

Pennsylvania Environmental Hazard
This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.
Dibenzoyl peroxide

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

16 OTHER INFORMATION

Revision Information

Revision Date	03 MAR 2006	Revision Number 7
Supercedes Revision Dated	30-DEC-2004	

Revision Summary
Updated ingredient section.

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

Miscellaneous
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