

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT NAME	NOROX[®] 500-75P	TELEPHONE	870-572-2935
MANUFACTURER	Syrgis Performance Initiators, Inc.	CHEMTREC (24hr) (USA)	800-424-9300
ADDRESS	334 Phillips 311 Rd., Helena, AR 72342	(Maritime/International)	703-527-3887
CHEMICAL NAME	1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane	CAS NO.	6731-36-8
CHEMICAL FAMILY	Peroxyketal Peroxide	CHEMICAL FORMULA	C ₁₇ H ₃₄ O ₄

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>CAS NO.</u>	<u>%</u>
1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane	6731-36-8	74 - 76
Diisobutyl Phthalate	84-69-5	22 - 25
Di-tert-butylperoxide	110-05-4	0 - 4
3,3,5-Trimethylcyclohexanone	873-94-9	0-2

SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

PHYSICAL HAZARDS	Organic Peroxide. Decomposition. Combustible Liquid.
HEALTH HAZARDS	Irritant
EXPOSURE LIMITS	Both ACGIH and OSHA PEL have not been established for this chemical.
ROUTES OF EXPOSURE	
Skin Contact	May cause slight skin irritation, including redness and swelling, drying, scaling, thickening, depigmentation, and hair loss.
Eye Contact	May cause slight eye irritation, including redness and swelling.
Ingestion	May cause central nervous system depression. Similar products may cause irritation of mucous membranes and transient urinary incontinence.
Inhalation	No known applicable information.
EFFECTS OF OVER-EXPOSURE	No known applicable information.

SECTION 4 - FIRST-AID MEASURES

SKIN	Wash contaminated area thoroughly with soap and water.
EYES	Remove any contact lenses at once. Flush eyes with water for at least 20 - 30 minutes and seek medical attention.
INGESTION	Contact a physician, hospital or Poison Control Center at once. DO NOT INDUCE VOMITING. If conscious and not convulsing, give a glass of milk or water.
INHALATION	Remove to fresh air, if coughing, breathing becomes labored, irritation develops or other symptoms develop, seek medical attention at once, even if symptoms develop several hours after the exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT	~ 103°F (39.5°C)
FLAMMABLE LIMITS	Not established.
AUTOIGNITION POINT	Not established.
EXTINGUISHING MEDIA	Water from a safe distance - preferably with a fog nozzle. In case of very small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective.
SPECIAL FIRE FIGHTING PROCEDURES	Firemen should be equipped with protective clothing and SCBA's. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. In case of fire near storage area, cool the containers with water spray.
UNUSUAL FIRE AND EXPLOSION HAZARDS	The heat of decomposition of the peroxides adds to the heat of the fire. Chemicals may explode when exposed to heat.
HAZARDOUS COMBUSTION PRODUCTS	Irritating and highly toxic gases may be generated along with carbon dioxide and carbon monoxide.

NOROX[®] 500-75P**SECTION 6 - ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE**

Evacuate area of all unnecessary personnel. Remove all sources of ignition. Refer to protective measures listed in sections 7 and 8. Spilled material should be swept up with an inert, moist diluent such as perlite, vermiculite, or sand. Keep spilled material from entering drains, sewers, streams, etc. Carefully collect the material and transfer into a clean polyethylene lined or a polyethylene drum disposal container. Add water to container. Label container and store in a secure area for proper disposal.

SECTION 7 - HANDLING AND STORAGE**HANDLING**

Rotate stock using the oldest material first. Avoid contact with skin, eyes and clothing. Use PPE as specified in Section 8. Avoid breathing vapors and use with adequate ventilation. Keep containers closed to prevent contamination. Keep away from sources of heat, sparks or flame. Take precautionary measures against static discharge. Do not add to hot solvents or monomers as a violent decomposition and/or reaction may result. Keep in original container. **DO NOT USE NEAR FOOD OR DRINK.** Wash thoroughly after handling.

STORAGE

The stability of this peroxide formulation is directly related to the shipping and storage temperature history. Cool storage at 80°F (27°C) or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 100°F (38°C) and higher will cause product degradation, gassing and potential container rupture which can result in a fire and/or explosion. Store out of direct sunlight in a well ventilated area away from combustible and incompatible materials. **DO NOT STORE WITH FOOD OR DRINK.** Refer to NFPA 432 Code for the Storage of Organic Peroxide Formulations from the National Fire Protection Association for additional storage information.

OTHER PRECAUTIONS

Unmixed, uncontaminated material, remaining at the end of the day, shall be returned to a proper organic peroxide storage area. Under no circumstances should material be returned to the original container.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**VENTILATION**

Use adequate ventilation.

RESPIRATORY PROTECTION

Not generally required unless necessary to prevent respiratory irritation. If necessary use NIOSH approved cartridge respirator with organic vapor cartridges. In case of spill or leak of unknown concentration, use NIOSH approved supplied air respirator.

EYE PROTECTION

Safety goggles recommended, goggles with a face shield are preferred. Permanent eyewash is highly recommended

HAND PROTECTION

Protective gloves recommended, solvent resistant, such as butyl rubber, nitrile or neoprene.

OTHER

A safety shower and eyewash is highly recommended when the risk of a significant exposure exists.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE AND ODOR:**

Transparent to slightly yellow liquid with a particular odor.

BOILING POINT:

Decomposes.

SPECIFIC GRAVITY:

>1

VAPOR PRESSURE:

Not established.

FLASH POINT:

~103°F (39.5°C)

VAPOR DENSITY:

Not established.

FLAMMABLE LIMITS:

Not established.

EVAPORATION RATE:

Not established.

SADT:

65°C (149°F)

% VOLATILE BY VOLUME:

Not established.

pH:

Not applicable.

SOLUBILITY IN WATER:

Insoluble.

SECTION 10 - STABILITY AND REACTIVITY**STABILITY**

Potential unstable if not stored and handled properly.

CONDITIONS TO AVOID

Storage in direct sunlight, heat, flames, sparks. Prevent product contamination.

MATERIALS TO AVOID

Promoters, accelerators, organometallic compounds, strong acids, corrosives, oxidizing and reducing agents, or any hot material.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon dioxide, carbon monoxide, ketones, acetone, t-butanol and etc.

HAZARDOUS POLYMERIZATION

Will not occur.

NOROX[®] 500-75P**SECTION 11 - TOXICOLOGICAL INFORMATION****1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane****Hazard Data:****Toxicity**

Inhalation: Rat-LC₅₀: >800 mg/l (male), Rat-LC₅₀: >400<800 mg/l (female), Rat-LC₅₀: >800 mg/l [4hr] (combined).

Intradermal: Rabbit-LD₅₀: >8000 mg/kg.

Oral: Rat-LD₅₀: >12,918 mg/kg.

Diisobutyl Phthalate**Reproductive Effects**

Intraperitoneal: Rat-TD_{Lo}: 1250 mg/kg (5-15D preg), effects on fertility (post-implantation mortality).

Intraperitoneal: Rat-TD_{Lo}: 375 mg/kg (5-15D preg), effects on embryo or fetus (fetotoxicity), specific developmental abnormalities (musculoskeletal system).

Oral: Mouse-TD_{Lo}: 16800 mg/kg (7D male), paternal effects (testes, epididymis, sperm duct, other effects on male).

Oral: Rat-TD_{Lo}: 8400 mg/kg (7D male), paternal effects (testes, epididymis, sperm duct).

Toxicity

Intraperitoneal: Mouse-LD₅₀: 3990 mg/kg.

Intraperitoneal: Rat-LD₅₀: 3749 mg/kg.

Oral: Mouse-LD₅₀: 13 gm/kg.

Oral: Rat-LD₅₀: 15 gm/kg, no toxic effects noted.

Skin: Guinea pig-LD₅₀: 10 gm/kg.

Di-tert-butylperoxide**Toxicity**

Inhalation: Mouse -LC₅₀: >4103 ppm/4h, nutritional and gross metabolic (weight loss or decreased weight gain).

Dermal: Mouse-LD₅₀: ~19,000 mg/kg.

Oral: Rat-LD₅₀: >25,000 mg/kg.

3,3,5-Trimethylcyclohexanone**Toxicity**

Inhalation: Rat -LC₅₀: 142000 mg/m³.

SECTION 12 - ECOLOGICAL INFORMATION

No data is available on the preparation itself. The product should be prevented from entering drains, sewers, streams, etc.

SECTION 13 - DISPOSAL CONSIDERATIONS

Prevent material from entering drains, sewers, streams, etc.

Immediately dispose of waste material at a RCRA approved hazardous waste management facility in accordance with federal, state and local regulations.

Controlled burning is the preferred disposal method. This material may be burned in a chemical incinerator equipped with an afterburner and a scrubber. Dilution of peroxide to no more than 1% of the active oxygen or no more than 10wt% of the concentration (whichever is lower) in an inert organic solvent (which are readily soluble with the peroxide) is recommended.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name:	ORGANIC PEROXIDE TYPE C, LIQUID (1,1-Di-(tert-butylperoxy)-3,3,5-trimethylcyclohexane, ≤76%)
DOT Hazard Class:	5.2
UN/NA ID No.:	UN3103
DOT Packing Group:	PG II
Labels:	5.2 (Organic Peroxide)
2004 ERG GUIDE NO.:	146

NOROX[®] 500-75P**SECTION 15 - REGULATORY INFORMATION**

The following chemicals are 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.

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent</u>
None	N/A	N/A

Australian Inventory of Chemical Substances (AICS)

The ingredients in this product are listed in the Australian AICS Inventory.

Canadian Domestic Substances List (DSL)

The ingredients in this product are listed in the Canadian DSL Inventory.

Chinese Inventory of Existing Chemical Substances Manufactured or Imported in China (IECSC)

The ingredients in this product are listed in the Chinese IECSC Inventory.

European Inventory of Existing Commercial Chemical Substances (EINECS)

The ingredients in this product are listed in the European EINECS Inventory.

Japanese Existing and New Chemical Substances (ENCS)

The ingredients in this product are listed in the Japanese ENCS Inventory.

Korean Existing Chemicals List (ECL)

The ingredients in this product are listed in the Korean ECL Inventory.

US Toxic Substances Control Act (TSCA)

The ingredients in this product are listed in the US TSCA Inventory.

Status of Carcinogenicity

Not recognized as a carcinogen by the IARC, NTP or OSHA.

SECTION 16 - OTHER INFORMATION**VOC Information**

For information, call Syrgis Performance Initiators, Inc.

NFPA 432 Organic Peroxide Classification

Class II

NFPA 704 Rating

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
2	3	3

HMIS Rating

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
1	2	3

MSDS Reference: Norox 500-75P 0709.1

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.