



# MATERIAL SAFETY DATA SHEET

## NOROX<sup>®</sup> 410-50P

Syrgis Performance  
Initiators, Inc.  
Helena, AR

### SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

<b>PRODUCT NAME</b>	<b>NOROX<sup>®</sup> 410-50P</b>	<b>TELEPHONE</b>	870-572-2935
<b>MANUFACTURER</b>	Syrgis Performance Initiators, Inc.	<b>CHEMTREC (24hr) (USA)</b>	800-424-9300
<b>ADDRESS</b>	334 Phillips 311 Rd., Helena, AR 72342	<b>(Maritime/International)</b>	703-527-3887
<b>CHEMICAL NAME</b>	tert-Butyl peroxy-2-ethylhexanoate	<b>CAS NO.</b>	See section 2.
<b>CHEMICAL FAMILY</b>	Peroxyester	<b>CHEMICAL FORMULA</b>	C <sub>12</sub> H <sub>24</sub> O <sub>3</sub>

### SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>CAS NO.</u>	<u>%</u>
tert-Butyl peroxy-2-ethylhexanoate	3006-82-4	50
Di (2-ethylhexyl) phthalate	117-81-7	50

### SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

<b>PHYSICAL HAZARDS</b>	Organic Peroxide. Decomposition.
<b>HEALTH HAZARDS</b>	Irritant.
<b>EXPOSURE LIMITS</b>	Di (2-ethylhexyl) phthalate: OSHA PEL: 5 mg/m <sup>3</sup> ACGIH TLV: 5 mg/m <sup>3</sup>
<b>ROUTES OF EXPOSURE</b>	
<b>Skin Contact</b>	May produce moderate skin irritation including redness, swelling, drying and scaling, thickening depigmentation, and hair loss.
<b>Eye Contact</b>	May produce moderate to severe eye and mucous membrane irritation.
<b>Ingestion</b>	Relatively non-toxic by ingestion. May cause mucous membrane irritation and diarrhea. If swallowed may be aspirated resulting in inflammation and possible fluid accumulation in the lungs.
<b>Inhalation</b>	May be moderately irritating to the nose, throat and mucous membranes. May produce slight difficulty in breathing at high concentrations.
<b>EFFECTS OF OVER-EXPOSURE</b>	No data is available on the preparation itself. See Section 11 for information on components.

### SECTION 4 - FIRST-AID MEASURES

<b>SKIN</b>	Immediately remove any contaminated clothing. Wash contaminated area thoroughly with soap and copious amounts of water for at least 15 minutes. If irritation or adverse symptoms develop, seek medical attention.
<b>EYES</b>	Remove any contact lenses at once. Flush eyes with water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers. If irritation or adverse symptoms develop, seek medical attention.
<b>INGESTION</b>	<b>DO NOT INDUCE VOMITING.</b> Drink plenty of water. Immediately contact a physician, hospital or Poison Control Center at once.
<b>INHALATION</b>	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

<b>FLASH POINT</b>	198°F (92°C), SETA CC
<b>FLAMMABLE LIMITS</b>	Not Established.
<b>AUTOIGNITION POINT</b>	Not Established.
<b>EXTINGUISHING MEDIA</b>	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.
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Firemen should be equipped with protective clothing and SCBA's. In case of fire near storage area, cool the containers with water spray.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>	The heat of decomposition of the peroxides adds to the heat of the fire. In case of decomposition without flames, explosion risk exists due to the developing air/gas mixture.

**NOROX<sup>®</sup> 410-50P****SECTION 6 - ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE**

Evacuate area of all unnecessary personnel. Refer to protective measures listed in sections 7 and 8. Observe storage temperature limitations. Dilute spilled material with mineral spirits. The addition of mineral spirits will reduce the concentration of the peroxide and reduce its hazard potential. 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. Label container and store in a secure area for proper disposal. Observe recommended storage temperature for this material.

**SECTION 7 - HANDLING AND STORAGE****HANDLING**

Rotate stock using the oldest material first. Avoid contact with skin, eyes and clothing. Avoid breathing vapors and use with adequate ventilation. Use PPE as specified in Section 8. Keep containers closed to prevent contamination. Keep away from sources of heat, sparks or flame. 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**

Store in original containers and keep sealed. Cool storage at 50°F (10°C) or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 86°F (30°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 or in case of spill or leak of unknown concentration. If airborne concentrations are expected to exceed acceptable levels wear a NIOSH approved air-purifying respirator with an organic vapor cartridge or canister. When using respirators refer to OSHA's 29CFR 1910.134.

**EYE PROTECTION**

Safety goggles recommended, goggles with a face shield are preferred.

**HAND PROTECTION**

Protective gloves recommended, neoprene or nitrile rubber (solvent resistant).

**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:**

Clear, colorless liquid with a mild odor.

**BOILING POINT:**

Decomposes.

**SPECIFIC GRAVITY:**

.9 at 25°C

**VAPOR PRESSURE:**

Not established.

**FLASH POINT:**

198°F (92°C), SETA CC

**VAPOR DENSITY:**

Not established.

**FLAMMABLE LIMITS:**

Not established.

**EVAPORATION RATE:**

<1 (ethyl ether = 1)

**SADT:**

40°C (104°F)

**% VOLATILE BY VOLUME:**

100

**pH:**

Not applicable.

**SOLUBILITY IN WATER:**

Negligible.

**SECTION 10 - STABILITY AND REACTIVITY****STABILITY**

Unstable.

**CONDITIONS TO AVOID**

Contamination. Storage in direct sunlight, heat, flames, sparks. Prolonged storage above 86°F (30°C). Storage above SADT. Storage near flammable or combustible materials.

**MATERIALS TO AVOID**

Promoters, accelerators, metals, acids, corrosives, oxidizing and reducing agents, or any hot material.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Decomposition produces flammable gasses. Various carbon oxides and hydrocarbons.

**NOROX<sup>®</sup> 410-50P****HAZARDOUS POLYMERIZATION** Will not occur.**SECTION 11 - TOXICOLOGICAL INFORMATION****t-Butyl peroxy-2-ethylhexanoate****Hazard Data:****Oral:** Rat--LD<sub>50</sub>: 10000 mg/kg.**Dermal:** Rabbit--LD<sub>50</sub>: 16818 mg/kg**Di (2-ethylhexyl) phthalate (DEHP)****Hazard Data**

**General:** DEHP was administered to rats and mice in a lifetime bioassay sponsored by the U.S. National Toxicology Program (NTP). High feed concentrations (mice: 300 and 6000 ppm; rats: 6000 and 12,000 ppm) were used because of the very low toxicity of DEHP. Liver tumors were produced at both dose levels in each species. Further studies have shown that the liver tumors probably arose from the ability DEHP at high doses in rodents to perturb lipid metabolism, to proliferate peroxisomes, or to increase the rate of cell division. Since non-rodent species (including primates) have been shown to be very resistant to these effects, and since DEHP is not genotoxic, DEHP probably presents a negligible carcinogenic risk to humans at exposure levels typical of occupational or consumer use. Oral doses of this material that were high enough to cause toxicity in pregnant animals also produced reduced some minor abnormalities in their offspring. High oral doses of this material given to male animals produced reduced fertility. However, high doses to humans handling this material are not expected since oral consumption is not a likely route of significant exposure. Because this material does not evaporate readily and is not easily absorbed through the human skin, it is not expected to produce such effects in humans through inhalation or skin exposure, when handled in a manner consistent with the precautionary measures contained in this material safety data sheet.

**Oral:** Rat--LD<sub>50</sub>: 30,600 mg/kg; Rabbit--LD<sub>50</sub>: 33,900 mg/kg; Human--TD<sub>Lo</sub>: 480 mg/kg, changes in structure or**Skin:** Rabbit--LD<sub>50</sub>: >19,960 mg. Rabbit skin irritation: slight. Human skin irritation: none. Human skin sensitization: none.**Eye:** Rabbit eye irritation: Slight**SECTION 12 - ECOLOGICAL INFORMATION**

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

**t-Butyl peroxy-2-ethylhexanoate**

No Data

**Di (2-ethylhexyl) phthalate (DEHP)****Oxygen Demand Data**

BOD-5: 40 mg/g

**Acute Aquatic Effects Data**96h LC<sub>50</sub> (fathead minnow): > 0.67 mg/l NOEC: 0.67 mg/l (limit of solubility in fresh water)96h LC<sub>50</sub> (rainbow trout): > 0.32 mg/l NOEC: 0.32 mg/l (limit of solubility in fresh water)96h LC<sub>50</sub> (sheepshead minnow): > 0.17 mg/l NOEC: 0.17 mg/l (limit of solubility in sea water)96h LC<sub>50</sub> (bluegill sunfish): > 0.20 mg/l NOEC: 0.20 mg/l (limit of solubility in fresh water)96h LC<sub>50</sub> (daphnid): > 0.16 mg/l NOEC: 0.16 mg/l (limit of solubility in fresh water)96h EC<sub>50</sub> (Slenastrum capricornutum): > 0.10 mg/l**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.

RCRA Classification of unadulterated product as a waste

Reactive (D003)

Ignitable (D001)

**NOROX<sup>®</sup> 410-50P****SECTION 14 - TRANSPORT INFORMATION**

**DOT Shipping Name:** ORGANIC PEROXIDE TYPE E, LIQUID,  
TEMPERATURE CONTROLLED  
(TERT-BUTYL PEROXY-2-ETHYLHEXANOATE, 50%)

**DOT Hazard Class:** 5.2

**UN/NA ID No.:** UN3117

**DOT Packing Group:** PG II

**Control Temperature:** +30°C (86°F)

**Emergency Temperature:** +35°C (95°F)

**Labels:** 5.2 (Organic Peroxide)

**2004 ERG GUIDE NO.:** 148

**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>
Di (2-ethylhexyl) phthalate	117-81-7	50

**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****NFPA 432 Organic Peroxide Classification**

Class III - 55 gal containers

Class IV - 5 gal containers

**NFPA 704 Rating**

Health

1

Flammability

2

Reactivity

2

**HMIS Rating**

Health

1

Flammability

2

Reactivity

2

**MSDS Reference:** Norox 410-50P MSDS 0709

**DISCLAIMER OF LIABILITY**

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