



# MATERIAL SAFETY DATA SHEET

Syrgis Performance  
Initiators, Inc.  
Helena, AR

## NOROX<sup>®</sup> 410

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

PRODUCT NAME	NOROX <sup>®</sup> 410	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	tert-Butyl peroxy-2-ethylhexanoate	CAS NO.	3006-82-4
CHEMICAL FAMILY	Organic Peroxide - Peroxyester	CHEMICAL FORMULA	C <sub>12</sub> H <sub>24</sub> O <sub>3</sub>

### SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	%
tert-Butyl peroxy-2-ethylhexanoate	3006-82-4	98

### SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

PHYSICAL HAZARDS	Organic Peroxide. Decomposition.
HEALTH HAZARDS	Irritant.
EXPOSURE LIMITS	No data.
ROUTES OF EXPOSURE	
Skin Contact	May produce moderate skin irritation including redness, swelling, drying and scaling, thickening depigmentation, and hair loss.
Eye Contact	May produce moderate to severe eye and mucous membrane irritation...
Ingestion	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.
Inhalation	May be moderately irritating to the nose, throat and mucous membranes. May produce slight difficulty in breathing at high concentrations.
EFFECTS OF OVER-EXPOSURE	None established.

### SECTION 4 - FIRST-AID MEASURES

SKIN	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.
EYES	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.
INGESTION	<b>Do Not</b> induce vomiting. Drink plenty of water. Immediately call a physician. For aid to physician, suggest local Poison Control Center.
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:	180°F (82°C), SETA CC, ASTM D 3278
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. 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. In case of decomposition without flames, explosion risk exists due to the developing air/gas mixture.

**NOROX<sup>®</sup> 410****SECTION 6 - ACCIDENTAL RELEASE MEASURES**

<b>STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE</b>	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.
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**SECTION 7 - HANDLING AND STORAGE**

<b>HANDLING</b>	Rotate stock using the oldest material first. Avoid contact with skin, eyes and clothing. 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 transfer to rigid containers with tight closures. <b>DO NOT USE NEAR FOOD OR DRINK.</b> Wash thoroughly after handling.
<b>STORAGE</b>	Cool storage at 50°F (10°C) or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 68°F (20°C) and higher will cause product degradation, gassing and potential container rupture which can result in a fire and/or explosion. Store in original container out of direct sunlight in a well ventilated area away from combustible and incompatible materials. <b>DO NOT STORE WITH FOOD OR DRINK.</b> Refer to NFPA 432 Code for the Storage of Organic Peroxide Formulations from the National Fire Protection Association for additional storage information.
<b>OTHER PRECAUTIONS</b>	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**

<b>VENTILATION</b>	Use adequate ventilation.
<b>RESPIRATORY PROTECTION</b>	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.
<b>EYE PROTECTION</b>	Safety goggles recommended, goggles with a face shield are preferred.
<b>HAND PROTECTION</b>	Protective gloves recommended, neoprene or nitrile rubber (solvent resistant).
<b>OTHER</b>	A safety shower and eyewash is highly recommended when the risk of a significant exposure exists.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE AND ODOR:</b>	Clear, colorless liquid with a mild odor.	<b>SPECIFIC GRAVITY:</b>	.9 @ 25°C (Water = 1)
<b>BOILING POINT:</b>	Decomposes.	<b>FLASH POINT:</b>	180°C (82°C), SETA CC
<b>VAPOR PRESSURE:</b>	Not established.	<b>FLAMMABLE LIMITS:</b>	Not established.
<b>VAPOR DENSITY:</b>	Not established.	<b>SADT:</b>	~ 40°C (104°F)
<b>EVAPORATION RATE:</b>	<1 (ethyl ether = 1)	<b>pH:</b>	Not applicable.
<b>% VOLATILE BY VOLUME:</b>	100		
<b>SOLUBILITY IN WATER:</b>	Negligible.		

**SECTION 10 - STABILITY AND REACTIVITY**

<b>STABILITY</b>	Unstable.
<b>CONDITIONS TO AVOID</b>	Contamination. Storage in direct sunlight, heat, flames, sparks. Prolonged storage above 68°F (20°C). Storage above SADT. Storage near flammable or combustible materials
<b>MATERIALS TO AVOID</b>	Promoters, accelerators, metals, acids, corrosives, oxidizing and reducing agents, or any hot material.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Decomposition produces flammable gasses. Various carbon oxides and hydrocarbons.

**NOROX<sup>®</sup> 410****HAZARDOUS POLYMERIZATION** Will not occur.**SECTION 11 - TOXICOLOGICAL INFORMATION****t-Butyl peroxy-2-ethylhexanoate****Hazard Data:****Oral:** Rat--LD<sub>50</sub>: 10,000 mg/kg.**Dermal:** Rabbit--LD<sub>50</sub>: 16,818 mg/kg.**SECTION 12 - ECOLOGICAL INFORMATION**

The product has to be classified as being dangerous to water. The product should be prevented from entering drains, sewers, streams, etc.

**Bacteria toxicity:** (Activated sludge respiration inhibition test)--EC<sub>50</sub>: 64 mg/l.**Acute toxicity:** Zebra fish--LC<sub>50</sub> (96hr): 8.7 g/ml.**Biodegradability (Closed Bottle Test):** Completely biodegradable.**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)

**SECTION 14 - TRANSPORT INFORMATION**

**DOT Shipping Name:** ORGANIC PEROXIDE TYPE C, LIQUID,  
TEMPERATURE CONTROLLED  
(TERT-BUTYL PEROXY-2-ETHYLHEXANOATE, 98%)

**DOT Hazard Class:** 5.2

**UN/NA ID No.:** UN3113

**DOT Packing Group:** PG II

**Control Temperature:** +20°C (68°F)

**Emergency Temperature:** +25°C (77°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>
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)**

**NOROX<sup>®</sup> 410**

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 II - 55 gal containers

Class III - 5 gal containers

**NFPA 704 Rating**

Health

1

Flammability

3

Reactivity

3

**HMIS Rating**

Health

1

Flammability

2

Reactivity

2

**MSDS Reference:** Norox 410 MSDS 0709

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