



MATERIAL SAFETY DATA SHEET

NOROX[®] 411-75P

Syrgis Performance
Initiators, Inc.
Helena, AR

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT NAME	NOROX [®] 411-75P	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	tert-Amyl peroxy-2-ethylhexanoate	CAS NO.	See section 2.
CHEMICAL FAMILY	Peroxyester	CHEMICAL FORMULA	C ₁₃ H ₂₆ O ₃

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	%
tert-Amyl peroxy-2-ethylhexanoate	686-31-7	75
Di (2-ethylhexyl) phthalate	117-81-7	25

SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

PHYSICAL HAZARDS	Organic Peroxide. Decomposition. Combustible liquid. Unstable.
HEALTH HAZARDS	Potential irritant.
EXPOSURE LIMITS	Di (2-ethylhexyl) phthalate: OSHA PEL: 5 mg/m ³ ACGIH TLV: 5 mg/m ³
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	No data is available on the preparation itself. See Section 11 for information on components.

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	DO NOT INDUCE VOMITING. Drink plenty of water. Immediately contact a physician, hospital or Poison Control Center at once.
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)
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[®] 411-75P**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.
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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. 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 unused portions in original container. Do not transfer to rigid containers with tight closures. <u>DO NOT USE NEAR FOOD OR DRINK</u> . Wash thoroughly after handling.
STORAGE	Keep material in its original container away from any incompatible materials, direct sunlight or other sources of heat. Store in an isolated, well-ventilated area below 50°F (10°C). Keep below 68°F (20°C) at all times. Temperatures above 68°F (20°C) may lead to vigorous decomposition and fire. <u>DO NOT STORE WITH FOOD OR DRINK</u> . 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. In case of spill or leak of unknown concentration, use NIOSH approved supplied air respirator. 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 faint, sweet odor.	SPECIFIC GRAVITY:	.91
BOILING POINT:	Decomposes.	FLASH POINT:	180°F (82°C)
VAPOR PRESSURE:	Not established.	FLAMMABLE LIMITS:	Not established.
VAPOR DENSITY:	Not established.	SADT	≥40°C (104°F)
EVAPORATION RATE:	<1 (ethyl ether =1)	pH:	Not applicable.
% VOLATILE BY VOLUME:	100		
SOLUBILITY IN WATER:	Negligible.		

SECTION 10 - STABILITY AND REACTIVITY

STABILITY	Unstable.
CONDITIONS TO AVOID	Contamination. Direct sunlight. Open flames. Sparks. Prolonged storage above 68°F (20°C). Storage at or 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.
HAZARDOUS POLYMERIZATION	Will not occur.

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SECTION 11 - TOXICOLOGICAL INFORMATION

No data is available on the preparation itself.

t-Amyl peroxy-2-ethylhexanoate

Hazard Data: No Data

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--LD₅₀: 30,600 mg/kg; Rabbit--LD₅₀: 33,900 mg/kg; Human--TD_{Lo}: 480 mg/kg, changes in structure or

Skin: Rabbit--LD₅₀: >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-Amyl peroxy-2-ethylhexanoate

No Data

Di (2-ethylhexyl) phthalate (DEHP)

Oxygen Demand Data

BOD-5: 40 mg/g

Acute Aquatic Effects Data

96h LC₅₀ (fathead minnow): > 0.67 mg/l NOEC: 0.67 mg/l (limit of solubility in fresh water)

96h LC₅₀ (rainbow trout): > 0.32 mg/l NOEC: 0.32 mg/l (limit of solubility in fresh water)

96h LC₅₀ (sheepshead minnow): > 0.17 mg/l NOEC: 0.17 mg/l (limit of solubility in sea water)

96h LC₅₀ (bluegill sunfish): > 0.20 mg/l NOEC: 0.20 mg/l (limit of solubility in fresh water)

96h LC₅₀ (daphnid): > 0.16 mg/l NOEC: 0.16 mg/l (limit of solubility in fresh water)

96h EC₅₀ (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.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name:	ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED (TERT-AMYL PEROXY-2-ETHYLHEXANOATE, 75%)
DOT Hazard Class:	5.2
UN/NA ID No.:	UN3115
DOT Packing Group:	PG II
Control Temperature:	+20°C (68°F)
Emergency Temperature:	+25°C (77°F)
Labels:	5.2 (Organic Peroxide)

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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	25

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.

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

NFPA 704 Rating

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
0	3	2

HMIS Rating

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

MSDS Reference: Norox 411-75P MSDS 0709

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