



MATERIAL SAFETY DATA SHEET

NOROX[®] 401

Syrgis Performance
Initiators, Inc.
Helena, AR

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT NAME	NOROX [®] 401	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	tertiary-Amyl peroxy-2-ethylhexyl carbonate	CAS NO.	70833-40-8
CHEMICAL FAMILY	Organic Peroxide - Peroxyester	CHEMICAL FORMULA	C ₁₄ H ₂₈ O ₄

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	%
tertiary-Amyl peroxy-2-ethylhexyl carbonate	70833-40-8	≥95

SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

PHYSICAL HAZARDS	Organic Peroxide. Decomposition.
HEALTH HAZARDS	Irritant.
ROUTES OF EXPOSURE	
Skin Contact	Skin irritant, causes redness, blistering, and edema.
Eye Contact	Eye contact may cause severe irritation.
Ingestion	May be harmful or fatal by ingestion.
Inhalation	May be toxic by inhalation.
EFFECTS OF OVER-EXPOSURE	Prolonged inhalation of vapors may cause mucous membrane irritation. There are no known medical conditions, which are recognized as being aggravated by exposure.

SECTION 4 - FIRST-AID MEASURES

SKIN	Wash contaminated area thoroughly with soap and water.
EYES	Flush eyes with water for 15 minutes and seek medical attention.
INGESTION	Do Not 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 breathing becomes labored or irritation develops, seek medical attention.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT	208°F (98°C), SETA CC
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. Possible explosive decomposition in a fire situation.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE	Ventilate area and exclude sources of ignition. Refer to protective measures listed in sections 7 and 8. Dike to prevent runoff from entering drains, sewers, streams, etc. and transfer into containers. Spilled material should be swept up with an inert, moist diluent such as perlite, vermiculite, or sand, and placed in a clean polyethylene lined drum or a polyethylene drum. Wet with water prior to sealing container.
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NOROX[®] 401**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 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	Storage at or below 70°F (21°C) is recommended to ensure product safety. Prolonged storage at elevated temperatures will result in product degradation, gassing and potential container rupture which can result in a fire and/or explosion.. Cooler storage is recommended for longer shelf life. Store in an isolated, well-ventilated area. Keep material in its original container away from combustible and any incompatible materials, direct sunlight or other sources of heat. <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	Mechanical, general.
RESPIRATORY PROTECTION	Not generally required unless necessary to prevent respiratory irritation. In case of spill or leak of unknown concentration or if airborne concentrations are expected to exceed acceptable levels wear a NIOSH/MSHA 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, face shield is preferred. A permanent eyewash is highly recommended.
HAND PROTECTION	Protective gloves recommended, neoprene or synthetic rubber (solvent resistant).
OTHER	A safety shower and eyewash is recommended when the risk of a significant exposure exists.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Colorless to light yellow liquid with a characteristic peroxyester odor.		
BOILING POINT:	Decomposes.	SPECIFIC GRAVITY:	.9
VAPOR PRESSURE:	Not established.	FLASH POINT:	208°F (98°C), SETA CC
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:	<1% by weight		

SECTION 10 - STABILITY AND REACTIVITY

STABILITY	Stable when kept in original, closed container, out of direct sunlight at temperatures below 100°F (38°C). Decomposition of product due to heat or contamination may lead to strong explosions.
CONDITIONS TO AVOID	Storage in direct sunlight or elevated temperatures. Prevent product contamination.
MATERIALS TO AVOID	Promoters, accelerators, strong acids, reducing agents, or any hot material.
HAZARDOUS DECOMPOSITION PRODUCTS	Acrid smoke and irritating fumes, hydrocarbons, carbon monoxide and carbon dioxide.
HAZARDOUS POLYMERIZATION	Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

tertiary-Amyl peroxy-2-ethylhexyl carbonate

Hazard Data:

Oral: Rat--LD₅₀: >5,000 mg/kg.

SECTION 12 - ECOLOGICAL INFORMATION

NOROX[®] 401

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.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: ORGANIC PEROXIDE TYPE D, LIQUID
(TERT-AMYL PEROXY-2-EHTYLHEXYL CARBONATE, ≤100%)

DOT Hazard Class: 5.2

UN/NA ID No.: UN3105

DOT Packing Group: PG II

Labels: 5.2 (Organic Peroxide)

2004 ERG GUIDE NO.: 145

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

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>
1	3	2

HMIS Rating

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

MSDS Reference: Norox 401 MSDS 0709

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