

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT NAME	NOROX[®] TBPB	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-Butyl Peroxybenzoate (TBPB)	CAS NO.	614-45-9
CHEMICAL FAMILY	Organic Peroxide (Peroxyester)	CHEMICAL FORMULA	C ₆ H ₅ CO ₃ C(CH ₃) ₃

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>CAS NO.</u>	<u>%</u>
Tert-Butyl Peroxybenzoate	614-45-9	98

SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

PHYSICAL HAZARDS	Organic Peroxide. Decomposition.
HEALTH HAZARDS	Severe Irritant.
EXPOSURE LIMITS	None established.
ROUTES OF EXPOSURE	
Skin Contact	Severe skin irritant causes, redness, blistering, and edema.
Eye Contact	Eye contact causes severe corrosion and may cause blindness.
Ingestion	Human systemic effects by ingestion: changes in structure or function of esophagus, nausea, or vomiting, and other gastrointestinal effects.
Inhalation	Moderately toxic by inhalation.
EFFECTS OF OVER-EXPOSURE	Prolonged inhalation of vapors may cause mucous membrane irritation and vertigo. TBPB has been found to be tumorigenic in mice. There are no known medical conditions, which are recognized as being aggravated by exposure.

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 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	>200°F (93°C), C.O.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. Dry chemical combined with TBPB, may re-ignite. Light water additives may be particularly effective at extinguishing TBPB fires.
SPECIAL FIRE FIGHTING PROCEDURES	Fireman should be equipped with protective clothing and SCBA's. In case of fire near storage area, cool the containers with water spray. If dry chemical is used to extinguish a TBPB fire, the extinguished area must be thoroughly wetted down with water to prevent re-ignition.
UNUSUAL FIRE AND EXPLOSION HAZARDS	The heat of decomposition of the peroxides adds to the heat of the fire. Dry chemical fire extinguishing agent may catalyze the decomposition.

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE	Dike spill to prevent runoff from entering drains, sewers, streams, etc. Wet spilled material with water and absorb with an inert absorbent material such as perlite, vermiculite, or sand. Sweep up using non-sparking tools and place in a clean polyethylene drum or a polyethylene pail. DO NOT place into a steel container, lined or unlined, as a decomposition may occur. Treat any contaminated cardboard packaging as hazardous waste. Wet container contents with additional water prior to sealing.
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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 in original container. DO NOT USE NEAR FOOD OR DRINK. Wash thoroughly after handling.
STORAGE	Store TBPB in its original container at or below 80°F (27°C) to ensure product safety. Prolonged storage at elevated temperatures will result in product degradation. Cooler storage is recommended for longer shelf life. 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	Mechanical, general.
RESPIRATORY PROTECTION	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. 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 recommended when the risk of a significant exposure exists.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Colorless to slightly yellow with a mild aromatic odor.	SPECIFIC GRAVITY:	1.0
BOILING POINT:	185 at 30 mmHg	FLASH POINT:	>200°F (93°C), C.O.C.
VAPOR PRESSURE:	.33 at 50°C (122°F)	FLAMMABLE LIMITS:	Not established.
VAPOR DENSITY:	Not established.	SADT:	>60°C (140°F)
EVAPORATION RATE:	Not established.	pH:	Not applicable.
% VOLATILE BY VOLUME:	Not established.		
SOLUBILITY IN WATER:	Insoluble in water.		

SECTION 10 - STABILITY AND REACTIVITY

STABILITY	Stable when kept in original, closed container, out of direct sunlight at temperatures below 80°F (27°C).
CONDITIONS TO AVOID	Avoid contamination. Do not store in direct sunlight. Temperatures above SADT.
MATERIALS TO AVOID	Dimethylaniline, cobalt naphthenate and other promoters, accelerators, reducing agents, or any hot material.
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon monoxide, carbon dioxide. Some decomposition products may be flammable.
HAZARDOUS POLYMERIZATION	Will not occur.

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SECTION 11 - TOXICOLOGICAL INFORMATION

Tert-Butyl Perbenzoate

Hazard Data:

Inhalation: Rat--TC_{Lo}: 6 mg/m³/4H; Mouse--LC: >57 mg/m³/4H.

Oral: Rat--LD₅₀: 1012 mg/kg; Mouse--LD₅₀: 914 mg/kg.

SECTION 12 - ECOLOGICAL INFORMATION

The product should be prevented from entering drains, sewers, streams, etc.

Tert-Butyl Perbenzoate

Biological degradability: 72% after 28 days (closed bottle test).

Partition coeff of K_{ow}: 750 (log P_{ow}=2.9)

Bioconcentration factor (BCF): 93

Aquatic Toxicity

Fish: Poecilia reticulata--LC₅₀: 8.6 mg/l/96hr. NOEC: 4.6 mg/l/96hr

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved facility. Processing, use, or contamination of this product may change the waste management options.

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 C, LIQUID (TERT-BUTYL PEROXYBENZOATE, ≤100%)
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

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.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

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The ingredients in this product are listed in the Philippines PICCS Inventory.

Status of Carcinogenicity

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

SECTION 16 - OTHER INFORMATION**VOC Information**

Using ASTM Test Method D-2369-87, but at 40°C (since TBPB decomposes rapidly above 100°C), Norox[®] TBPB contains 4.4% VOC, by weight, or 46 grams per liter. For more 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>
1	3	3

HMIS Rating

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

MSDS Reference: TBPB MSDS 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.

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