



**G E O**  
SPECIALTY CHEMICALS

**MATERIAL SAFETY DATA SHEET**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** Link-Cup® TMCH 40MB  
**SYNONYMS:** 1,1-bis(tert-butylperoxy)-3,3,5-trimethylcyclohexane, approximately 40% supported on EPM rubber.

**SUPPLIER:** GEO Specialty Chemicals, Inc.  
 50 North Market Street  
 Gibbstown, NJ 08027  
 1-800-423-7193 [24 hr]

**NFPA Rating:** NFPA 432 - Organic Peroxide Classification: Class V  
**HMIS Classification:** Health: 1 Flammability: 1 Reactivity: 1

**EMERGENCY TELEPHONE:**      **CHEMTREC: (800) 424-9300**  
 Outside USA - 00 1 (703) 527-3887 collect calls accepted

**EMERGENCY OVERVIEW:**

White to off-white granular solid. Mild Odor. Reactive: Exposure to temperatures above 140° F (60° C) may cause violent decomposition. Causes skin, eye and respiratory irritation. Harmful if swallowed or inhaled. Very toxic to aquatic organisms.

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient / CAS No.	Weight %	OSHA - PEL's	ACGIH 2002 - TLV's
1,1-Di (t-Butylperoxy) 3,3,5-trimethyl cyclohexane 6731-36-8	~40	None Established.	None Established.
Ethylene-Propylene Rubber (EPM) 9010-79-1	~60	None Established.	None Established.

**3. HAZARDS IDENTIFICATION**

**Hazard Information:** Organic peroxide. May cause eye, skin and respiratory tract irritation.  
**Eye Contact:** Causes mild eye irritation .  
**Inhalation:** Causes moderate respiratory tract irritation.  
**Skin Contact:** Causes moderate skin irritation.  
**Ingestion:** Harmful if swallowed.  
**Aggravated Conditions:** Dermatitis.

**4. FIRST AID MEASURES**

<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
<b>Skin Contact:</b>	Immediately wash thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation should develop.
<b>Eye Contact:</b>	Remove contact lenses. Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Seek immediate medical attention.
<b>Ingestion:</b>	Not an ingestion hazard under anticipated conditions of use. For accidental ingestion, drink one to two glasses of water (8-16 oz.). Do not induce vomiting. If vomiting should occur spontaneously, keep the airway clear. Get medical attention. Never give anything by mouth to an unconscious person.
<b>Notes To Physician:</b>	Large volumes of ingested material should be removed by gastric lavage with a large bore tube, being careful not to cause aspiration of the compound during removal of the tube.

## 5. FIRE FIGHTING MEASURES

<b>Flash Point (°F/°C)</b>	Not Determined
<b>Flash Point Method:</b>	NA
<b>Autoignition Temp. (°F):</b>	Not Determined
<b>Flammable Limits in Air - Lower (%):</b>	Not Determined
<b>Flammable Limits in Air - Upper (%):</b>	Not Determined
<b>Extinguishing Media:</b>	Water fog, carbon dioxide, foam, dry chemical.
<b>Fire Fighting Procedures:</b>	Cool exposed containers with water spray after extinguishing fire.
<b>Special Exposure Hazards:</b>	Use water spray to cool fire exposed surfaces. May produce hazardous fumes or hazardous decomposition products. Fight fire from a safe distance and from a protected location.
<b>Special Protective Equipment:</b>	Fire fighters should wear full protective clothing, including self-contained breathing equipment.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Procedure for Cleaning/Absorption:</b>	Stop leaks. Remove all sources of ignition. Ventilate area of leak or spill. Clean up immediately by sweeping or shoveling material into a properly labeled container for disposal. Avoid release to the environment. Keep wet with water. Do not flush to sewer or surface waters! Do not mix with other products or wastes. Wear adequate personal protective clothing and equipment.
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## 7. HANDLING AND STORAGE

<b>PRECAUTIONARY STATEMENTS:</b>	<p>WARNING!</p> <p>ORGANIC PEROXIDE.</p> <p>Causes skin, eye, and respiratory tract irritation.</p> <p>Harmful if absorbed through the skin, swallowed, or inhaled.</p> <p>Avoid contact with eyes, skin and clothing.</p> <p>Avoid contact with vapors from heated material.</p> <p>Avoid contamination of food, beverage, or smoking materials.</p> <p>Avoid release to the environment.</p> <p>Wear chemical splash goggles, gloves, and protective clothing when handling.</p> <p>Wash thoroughly after handling.</p> <p>Do not take internally.</p> <p>FOR INDUSTRIAL USE ONLY.</p>
<b>Handling:</b>	<p>Keep containers tightly closed when not in use.</p> <p>Use only in a well ventilated area.</p>
<b>Storage:</b>	<p>Store in a cool, dry place away from ignition sources and open flame.</p> <p>Store below 86° F (30° C) in original closed containers.</p>

Avoid storing product near incompatible materials. See MSDS Section 10.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls:</b>	Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.
<b>Respiratory Protection:</b>	When exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.
<b>Gloves:</b>	Appropriate chemical resistant gloves should be worn.
<b>Skin Protection:</b>	Normal work coveralls.
<b>Eye Protection:</b>	Chemical goggles or a face shield if splashing hazard exists.
<b>Other Personal Protection Data:</b>	Eyewash fountains and safety showers must be easily accessible. Avoid contamination of food, beverage or smoking materials.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	GRANULES
<b>Color:</b>	OFF WHITE/WHITE
<b>Odor:</b>	MILD
<b>pH:</b>	Not Applicable
<b>Specific Gravity</b>	Not Determined
<b>Density @ 20° C:</b>	~510 Kg/m <sup>3</sup> - bulk density
<b>Boiling Point (°F/°C):</b>	Not Determined
<b>Melting Point Range (°F/°C):</b>	Not Determined
<b>Freezing Point/Range (°F/°C):</b>	Not Determined
<b>Vapor Pressure:</b>	Not Determined
<b>Vapor Density (Air=1):</b>	Not Determined
<b>Evaporation Rate (BuAc=1):</b>	Not Determined
<b>Solubility in Water Description:</b>	INSOLUBLE
<b>VOCs (lbs/gallon):</b>	Not Determined
<b>Viscosity, Dynamic (Centipoise) @ 20° C:</b>	Not Determined
<b>Molecular Weight:</b>	Not Applicable

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions of handling, use and transportation.
<b>Conditions to Avoid:</b>	At or above 140° F (60° C) self-accelerating decomposition possible. Keep away from heat, sparks and flame. Avoid any source of ignition.
<b>Materials to Avoid:</b>	Heavy metal salts. Strong acids and bases. Reducing agents. Accelerators. Contaminants (e.g., rust, dust, ash). Combustible materials.
<b>Hazardous Decomposition Products:</b>	In case of fire and decomposition, flammable/explosive, irritant, corrosive, harmful/toxic gases and vapors are formed.
<b>Hazardous Polymerization:</b>	Not anticipated under normal or recommended handling and storage conditions.
<b>Additional Guidelines:</b>	For this product, the SADT (UN-Test H.4) is 140° F (60° C).

## 11. TOXICOLOGICAL INFORMATION

<b>PRINCIPAL ROUTES OF EXPOSURE:</b>	Skin, eyes and respiratory tract.
<b>Ingestion:</b>	Harmful if swallowed.
<b>Skin Contact:</b>	Causes mild skin irritation.
<b>Inhalation:</b>	May cause mild respiratory irritation.



Eye Contact: Causes mild eye irritation .

**Carcinogenicity Status:**

(Chemical Name, Wt. %, CAS No.)

1,1-Di (t-Butylperoxy) 3,3,5-trimethyl cyclohexane ~40 6731-36-8

IARC Group 1, Group 2A or Group 2B Carcinogen:	Not Listed
National Toxicology Program Known or Suspect Carcinogen:	Not Listed
ACGIH Confirmed or Suspected Carcinogen:	Not Listed
OSHA Select or Possible Select Carcinogen:	Not Listed

Ethylene-Propylene Rubber (EPM) ~60 9010-79-1

IARC Group 1, Group 2A or Group 2B Carcinogen:	Not Listed
National Toxicology Program Known or Suspect Carcinogen:	Not Listed
ACGIH Confirmed or Suspected Carcinogen:	Not Listed
OSHA Select or Possible Select Carcinogen:	Not Listed

Acute Oral LD50 (mg/kg):	LDo: >2000 mg/kg (rats) - peroxide 75% in di-butyl phthalate
Acute Dermal LD50 (mg/kg):	LDo (rabbit): >2000 mg/kg - peroxide 75% in di-butyl phthalate
Acute Inhalation LC50 (mg/l):	~800 mg/l/4hr (rats) - peroxide 75% in di-butyl phthalate
Mutagenicity/Genotoxicity:	No mutagenicity or genotoxicity studies have been carried out with this product.
Other Information:	Not a sensitizer - peroxide Mildly irritating to eyes and skin (rabbits) - peroxide

**12. ECOLOGICAL INFORMATION**

Mobility:	Not Determined
Persistence:	Not Determined
Bioaccumulative:	Not Determined
Ecotoxicological Information:	
Acute Fish Toxicity:	Not Determined
Acute Crustaceans Toxicity:	EC50 (48hr): 0.133 mg/l (Daphnia Magna) - peroxide
Acute Algae Toxicity:	Not Determined
Chemical Fate Information:	Not Determined
Other Information:	Peroxide is classified as very toxic for aquatic organisms and may cause long-term adverse effects in the aquatic environment.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:**

Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations. Do NOT mix with other chemical wastes. Since the emptied container retains product residue, all labeled hazard precautions must be observed.

**RCRA**

Is the unused product a RCRA hazardous waste if discarded? (Yes/No)	Yes
If yes, the EPA Hazardous Waste Code is:	D003 (reactivity)

**14. TRANSPORTATION INFORMATION**

**DOT:**

DOT Status:	REGULATED MATERIAL.
DOT Shipping Name:	ORGANIC PEROXIDE TYPE F, SOLID (1,1-DI-[t-BUTYL PEROXY]-3,3,5-TRIMETHYLCYCLOHEXANE, <42%)
UN/NA Number:	UN 3110
Hazard Class:	5.2

DOT Packing Group: II  
ERG#: 145  
Marine Pollutant: 1,1-DI-(t-BUTYL PEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE  
Harmonized Tariff Number: 3815.90.0000

ICAO/IATA:  
Status: REGULATED MATERIAL.  
Proper Shipping Name: ORGANIC PEROXIDE TYPE F, SOLID (1,1-DI-[t-BUTYL PEROXY]-3,3,5-TRIMETHYLCYCLOHEXANE, <42%)  
UN/NA Number: UN 3110  
IATA-DGR Class: 5.2  
Packing Group: None  
Label: Keep away from heat.  
Special Provisions: A20 - During the course of transport, this substance must be protected from direct sunshine and stored in a cool and well ventilated place, away from all sources of heat. A statement to this effect must be included on the Shipper's Declaration.

IMDG:  
Status: REGULATED MATERIAL.  
Proper Shipping Name: ORGANIC PEROXIDE TYPE F, SOLID (1,1-DI-[t-BUTYL PEROXY]-3,3,5-TRIMETHYLCYCLOHEXANE, <42%)  
UN/NA Number: UN 3110  
Hazard Class: 5.2  
Packing Group: None  
EMS No.: F-J, S-R  
Marine Pollutant: 1,1-DI-(t-BUTYL PEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE  
Flash Point (°F/°C) Not Determined

## 15. REGULATORY INFORMATION

### International Inventories:

USA TSCA Inventory Status: All of the components of this product are listed on the US EPA TSCA Inventory, or exempt from listing.

Canadian DSL: All of the components of this product are listed on the Canadian Domestic Substances List.

Canadian NDSL: Some of the components of this product are not found on the Canadian Non-Domestic Substances List.

European - EINECS: All of the components of this product are not listed on EINECS.  
European - ELINCS: All of the components of this product are not listed on ELINCS.  
EU - No-Longer Polymers List: None of the components of this product are listed on the EUNLP.

Japanese Chemical Inventory: All of the components of this product are listed on the JPENCS Inventory.  
Philippines Chemical Inventory: All of the components of this product are found on the Philippines Inventory.

Australian Chemical Inventory: All of the components of this product are listed on the Australian Chemical Inventory.

Korean Chemical Inventory: All of the components of this product are found on the Korean Existing Chemical Substances List.

### State and Federal Regulations: (Chemical Name, Wt. %, CAS No.)

1,1-Di (t-Butylperoxy) 3,3,5-trimethyl cyclohexane ~40 6731-36-8  
New Jersey Right-to-Know List: Listed

New Jersey Trade Secret Registry Number(s): N/A

SARA Section 311/ 312 Hazard Class: This product is classified as a SARA ACUTE HEALTH HAZARD.  
This product is classified as a SARA REACTIVE HAZARD.  
This product is classified as a SARA FIRE HAZARD.

Other Information: This product does not contain any ingredients subject to the reporting requirements of SARA Title III, Section 313 (40 CFR Part 372).

## 16. OTHER INFORMATION

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Telephone Number: (267) 960-7943

Reference Number: 11450X PD

Revision Date: 04/21/2008

Additional Information: None.

**Important Note:** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

\*\*\*END OF MSDS\*\*\*