



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Link-Cup™ TBPB  
**SYNONYMS:** t-Butyl Perbenzoate  
**SUPPLIER:** GEO Specialty Chemicals, Inc.  
340 Mathers Road  
Ambler, PA 19002-3420  
1-267-960-7900  
**NFPA Rating:** NFPA 432 - Organic Peroxide Classification: Class II  
**HMIS Classification:** Health: 1 Flammability: 2 Reactivity: 3

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

#### EMERGENCY OVERVIEW:

Slightly Yellow Liquid. Sweet, pungent odor. Reactive: Exposure to temperatures above 140° F (60° C) may cause violent decomposition. May cause eye, skin and respiratory irritation. May be harmful if swallowed.

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient / CAS No.	Weight %	OSHA - PEL's	ACGIH 2002 - TLV's
t-Butyl Perbenzoate 614-45-9	98	None Established.	None Established.
t-Butyl Hydroperoxide 75-91-2	0.15	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:** May cause mild respiratory irritation.  
**Skin Contact:** Causes mild skin irritation.  
**Ingestion:** Aspiration can be a hazard if this material is swallowed. Considered slightly toxic.  
**Aggravated Conditions:** None known.

MARKETED BY  
**HARWICK STANDARD  
DISTRIBUTION CORPORATION**  
60 S. Seiberling Street • Akron, Ohio 44305

#### 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>	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 medical attention.
<b>Ingestion:</b>	Not an ingestion hazard under anticipated conditions of use. For accidental ingestion if conscious, 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>	205° F (96° C)
<b>Flash Point Method:</b>	Setaflash
<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. Fight fire from a safe distance and from a protected location. Risk of explosion by shock, friction, fire or other sources of ignition.
<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>	Evacuate area of all unnecessary personnel. Remove all sources of ignition. Ventilate area of leak or spill. Observe storage temperature of <104° F (40° C). Contain and collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use vacuum truck. Transfer into labeled polyethylene-lined disposal containers using non-sparking equipment. Do not allow liquid to enter streams or waterways. 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>	<b>DANGER!</b> <b>ORGANIC PEROXIDE.</b>
<b>Handling:</b>	Causes irritation. Harmful if absorbed through the skin, swallowed, or inhaled. Avoid contact with eyes, skin and clothing. Avoid contact with vapors from heated material. Avoid contamination of food, beverage, or smoking materials. Avoid release to the environment. Keep containers tightly closed when not in use. Use only in a well ventilated area. Wear chemical splash goggles, gloves and protective clothing when handling. Wash thoroughly with soap and water after handling. Do not take internally. For industrial use only.

**Storage:**

Store in a cool, dry place away from ignition sources and open flame.  
 Avoid storing product near incompatible materials. See MSDS Section 10.  
 Store below 104° F (40° C).  
 Storage above 50°F (10°C) is recommended to avoid freezing.

DO NOT APPLY STEAM HEAT OR OTHER HIGH TEMPERATURE SOURCES TO THAW!

## 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>	Butyl rubber.
<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. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	LIQUID
<b>Color:</b>	SLIGHTLY YELLOW
<b>Odor:</b>	SWEET PUNGENT
<b>pH:</b>	Not Applicable
<b>Specific Gravity (Water=1):</b>	1.039 @25° C
<b>Density @ 20° C:</b>	Not Determined
<b>Boiling Point (°F/°C):</b>	Not Determined
<b>Melting Point Range (°F/°C):</b>	46° F/ 8° C
<b>Freezing Point/Range (°F/°C):</b>	50° F/ 10° C
<b>Vapor Pressure:</b>	0.33 mg of Hg at 122° F/ 50° C
<b>Vapor Density (Air=1):</b>	> 6
<b>% Volatile by Volume:</b>	100
<b>Evaporation Rate (BuAc=1):</b>	< 1 (ethyl ether=1)
<b>Solubility in Water Description:</b>	Negligible
<b>VOCs (lbs/gallon):</b>	Not Determined
<b>Viscosity, Dynamic (Centipoise) @ 20° C:</b>	approx. 8mPas @20° C
<b>Molecular Weight:</b>	194.3

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	STABLE. Temperatures above 131° F (55° C) may lead to exothermic decomposition.
<b>Conditions to Avoid:</b>	Keep away from heat, sparks and flame. Avoid any source of ignition. Avoid direct sunlight. Temperatures above 131° F (55° C) may lead to exothermic decomposition.
<b>Materials to Avoid:</b>	Accelerators. Corrosives. Metals. Combustible materials. Acids. Oxidizing agents. Reducing agents.
<b>Hazardous Decomposition Products:</b>	Carbon Monoxide and Carbon Dioxide. Hydrocarbons.
<b>Hazardous Polymerization:</b>	Not anticipated under normal or recommended handling and storage conditions.
<b>Additional Guidelines:</b>	None.

## 11. TOXICOLOGICAL INFORMATION

**PRINCIPAL ROUTES OF EXPOSURE:** Skin, eyes and respiratory tract.

**Ingestion:** Aspiration can be a hazard if this material is swallowed. Considered slightly toxic.  
**Skin Contact:** Causes mild skin irritation.  
**Inhalation:** May cause mild respiratory irritation.  
**Eye Contact:** Causes mild eye irritation .

### Carcinogenicity Status

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

t-Butyl Perbenzoate 98 614-45-9

**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

t-Butyl Hydroperoxide 0.15 75-91-2

**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):** 4,838 (rat); 2,500 (mouse)

**Acute Dermal LD50 (mg/kg):** 3,817 mg/kg (rat), 4 hour exposure

**Acute Inhalation LC50 (mg/l):** 200 mg/l (rat), 4 hour exposure.

**Mutagenicity/Genotoxicity:** In the Ames Test, the product has shown both weakly positive and negative results. In the Mouse Lymphoma and Sister Chromatid Exchange Assays, the product produced positive results.

**Other Information:** When administered in drinking water at various concentrations up to 500 mg/Kg, the peroxide caused forestomach lesions in rats and mice in a dose-dependent fashion.

Not a skin sensitizer.

Slightly irritating to rabbit eyes (7.0/110).

Moderately irritating to rabbit skin (3.7/8.0).

## 12. ECOLOGICAL INFORMATION

**Mobility:** Not Determined

**Persistence:** Not Determined

**Bioaccumulative:** Not Determined

**Ecotoxicological Information:**

**Acute Fish Toxicity:** 96 hour LC50 (P. reticulata) = 8.6 mg/l (moderately non-toxic)

**Acute Crustaceans Toxicity:** Not Determined

**Acute Algae Toxicity:** 72 hour EC50 (S. capricornutum) = 1.3 mg/l

**Chemical Fate Information:** Readily Biodegradable in closed bottle test. EC50 of 43 mg/l was reported in an activated sludge respiration inhibition test.

**Other Information:** No ecological studies have been carried out on this product.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:**

Dispose of product in an approved industrial waste landfill or incinerate in accordance with applicable Federal, state and local regulations.

### RCRA

Is the unused product a RCRA hazardous waste if discarded? (Yes/No)

Yes

If yes, the EPA Hazardous Waste Code is:

D003 (reactivity)

D001 (ignitability)

## 14. TRANSPORTATION INFORMATION

### DOT:

**DOT Status:** REGULATED MATERIAL.  
**DOT Shipping Name:** ORGANIC PEROXIDE TYPE C, LIQUID (t-BUTYL PEROXYBENZOATE, 98%)  
**UN/NA Number:** UN3103  
**Hazard Class:** 5.2  
**DOT Packing Group:** II  
**ERG#:** 146  
**Harmonized Tariff Number:** 2909.60.2000

### ICAO/IATA:

**Status:** REGULATED MATERIAL.  
**Proper Shipping Name:** ORGANIC PEROXIDE TYPE C, LIQUID (t-BUTYL PEROXYBENZOATE, 98%)  
**UN/NA Number:** UN3103  
**IATA-DGR Class:** 5.2  
**Packing Group:** None  
**ERG Code:** 146  
**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 C, LIQUID (t-BUTYL PEROXYBENZOATE, 98%)  
**UN/NA Number:** UN3103  
**Hazard Class:** 5.2  
**Packing Group:** None  
**EMS No.:** F-J, S-R  
**Flash Point (°F/°C):** 205° F (96° C)

## 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.

**European - EINECS:** All of the components of this product are listed on EINECS, or exempt from notification.

**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.)

t-Butyl Perbenzoate 98 614-45-9  
New Jersey Right-to-Know List: Listed  
Pennsylvania Right to Know List: Listed  
Massachusetts Right to Know Law: Listed  
Rhode Island Hazardous Substance List: Listed

t-Butyl Hydroperoxide 0.15 75-91-2  
New Jersey Right-to-Know List: Listed  
Pennsylvania Right to Know List: Listed  
Massachusetts Right to Know Law: Listed  
Rhode Island Hazardous Substance 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 FIRE HAZARD.  
This product is classified as a SARA CHRONIC HEALTH HAZARD.  
This product is classified as a SARA REACTIVE HAZARD.

**Other Information:**

SARA Reportable quantities:  
t-Butyl Peroxybenzoate (CERCLA RQ = 100 lbs)  
t-Butyl Hydroperoxide (CERCLA RQ = 100 lbs)

<b>16. OTHER INFORMATION</b>
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Prepared / Edited By: Peter R. Dluzneski - Manager of Technology  
Telephone Number: (267) 960-7926  
Reference Number: 114560 PD  
Revision Date: 10/04/2005  
Additional Information: None.  
Important Note: The information herein is given in good faith but no warranty, expressed or implied, is made.

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