



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Link-Cup™ NBV40C  
**SYNONYMS:** n-Butyl-4,4-di(tert-butyl-peroxy)valerate on inert filler  
**SUPPLIER:** GEO Specialty Chemicals, Inc.  
340 Mathers Road  
Ambler, PA 19002-3420  
1-267-960-7900  
**NFPA Rating:** NFPA 432 - Organic Peroxide Classification: Class V  
**HMIS Classification:** Health: 2\* Flammability: 1 Reactivity: 1

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

#### EMERGENCY OVERVIEW:

Off-white powder. Fruity odor. **WARNING: POSSIBLE CANCER HAZARD.** 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
Butyl 4,4-di-(tert-butylperoxy)-valerate 995-33-5	40-42	None Established.	None Established.
Calcium Carbonate 471-34-1	21-25	None Established.	None Established.
Silica 7631-86-9	34-35	None Established.	None Established.

### 3. HAZARDS IDENTIFICATION

**Hazard Information:** CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. Risk of cancer depends on level and duration of exposure. Organic peroxide. May cause eye, skin and respiratory tract irritation. Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined.

**Eye Contact:** Causes mild eye irritation .

**Inhalation:** Dust may cause irritation of the respiratory tract.

**Skin Contact:** Causes mild skin irritation.

**Ingestion:** May cause irritation of the mouth, throat and stomach.

**Aggravated Conditions:** None known.

**ACUTE OVEREXPOSURE:** Skin, eye and respiratory irritation.

#### 4. FIRST AID MEASURES

**Inhalation:** 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.

**Skin Contact:** Wash thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation should develop.

**Eye Contact:** 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.

**Ingestion:** 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.

**Notes To Physician:** 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

**Flash Point (°F/°C)** Not Determined

**Flash Point Method:** NA

**Autoignition Temp. (°F):** Not Determined

**Flammable Limits in Air - Lower (%):** Not Determined

**Flammable Limits in Air - Upper (%):** Not Determined

**Extinguishing Media:** Water fog, carbon dioxide, foam, dry chemical.

**Fire Fighting Procedures:** Cool exposed containers with water spray after extinguishing fire.

**Special Exposure Hazards:** Use water spray to cool fire exposed surfaces. Fight fire from a safe distance and from a protected location. Do not allow runoff to enter waterways.  
Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined. This product can produce flammable vapors which may travel to a source of ignition and flash back.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

#### 6. ACCIDENTAL RELEASE MEASURES

**Procedure for Cleaning/Absorption:** Evacuate area of all unnecessary personnel. 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. Do not flush to sewer or

surface waters! Do not mix with other products or wastes. Wear adequate personal protective clothing and equipment.

## 7. HANDLING AND STORAGE

**PRECAUTIONARY STATEMENTS:**    **WARNING!**

**Handling:**                            **POTENTIAL CANCER HAZARD!**  
Organic peroxide.  
Causes irritation.  
Avoid contact with eyes, skin and clothing.  
Avoid contact with vapors from heated material.  
Wash thoroughly with soap and water after handling.  
Do not take internally.  
For industrial use only.  
Avoid breathing dust; if exposed to high dust concentration, leave area immediately.  
Emptied container may retain product residues.  
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.  
Follow all warnings and precautions even after container is emptied.  
Harmful if swallowed or inhaled.

**Storage:**                            Avoid storing product near incompatible materials. See MSDS Section 10.  
Keep in tightly closed container.  
Store below 86° F (30° C).  
Store in a cool, dry place away from ignition sources and open flame.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:**            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.

**Respiratory Protection:**        When exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

**Gloves:**                                Appropriate chemical resistant gloves should be worn.

**Skin Protection:**                    Normal work coveralls.

**Eye Protection:**                    Chemical goggles or a face shield if splashing hazard exists.

**Other Personal Protection Data:**    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>	POWDER
<b>Color:</b>	WHITE
<b>Odor:</b>	FRUITY
<b>pH:</b>	Not Applicable
<b>Specific Gravity (Water=1):</b>	1.56 @ 68° F (20° C)
<b>Density @ 20° C:</b>	Unknown
<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 temperatures and pressures. Temperatures above 140° F (60° C) may lead to exothermic decomposition.
<b>Conditions to Avoid:</b>	Keep away from heat, sparks and flame. Avoid any source of ignition.
<b>Materials to Avoid:</b>	Strong acids. Strong alkalies. Accelerators. Reducing agents. Strong oxidizers.
<b>Hazardous Decomposition Products:</b>	Carbon Monoxide and Carbon Dioxide.
<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>	May cause irritation of the mouth, throat and stomach.
<b>Skin Contact:</b>	Causes mild skin irritation.
<b>Inhalation:</b>	Dust may cause irritation of the respiratory tract.
<b>Eye Contact:</b>	Causes mild eye irritation .

### Carcinogenicity Status (Chemical Name, Wt. %, CAS No.)

<b>Butyl 4,4-di-(tert-butylperoxy)-valerate 40-42 995-33-5</b>	
<b>IARC Group 1, Group 2A or Group 2B Carcinogen:</b>	Not Listed
<b>National Toxicology Program Known or Suspect Carcinogen:</b>	Not Listed
<b>ACGIH Confirmed or Suspected Carcinogen:</b>	Not Listed
<b>OSHA Select or Possible Select Carcinogen:</b>	Not Listed

Calcium Carbonate 21-25 471-34-1

IARC Group 1, Group 2A or Group 2B Carcinogen:  
National Toxicology Program Known or Suspect Carcinogen:  
ACGIH Confirmed or Suspected Carcinogen:  
OSHA Select or Possible Select Carcinogen:

Not Listed  
Not Listed  
Not Listed  
Not Listed

Silica 34-35 7631-86-9

IARC Group 1, Group 2A or Group 2B Carcinogen:  
National Toxicology Program Known or Suspect Carcinogen:  
ACGIH Confirmed or Suspected Carcinogen:  
OSHA Select or Possible Select Carcinogen:

Not Listed  
Not Listed  
Not Listed  
Not Listed

**Acute Oral LD50 (mg/kg):** Data not available on the product. The oral LD50 for the peroxide (40% in calcium carbonate) is greater than 5000 mg/kg (practically non-toxic).  
**Acute Dermal LD50 (mg/kg):** Data not available for the product. The peroxide (40% on calcium carbonate) has been shown to be mildly irritating to rabbits following a 24 hour exposure.  
**Acute Inhalation LC50 (mg/l):** The effects of this product are not known. The product is expected to cause mild respiratory tract irritation. The product contains crystalline silica which is known to cause silicosis.

**Mutagenicity/Genotoxicity:** No mutagenicity or genotoxicity studies have been carried out with this product.

**Other Information:** The carcinogenic properties of this product are not known. Crystalline silica (cristobalite and quartz) is classified by IARC as a known carcinogen to humans and by NTP as a substance which may be anticipated to be a carcinogen.

## 12. ECOLOGICAL INFORMATION

**Mobility:** Not Determined  
**Persistence:** Not Determined  
**Bioaccumulative:** Not Determined  
**Ecotoxicological Information:**  
**Acute Fish Toxicity:** Not Determined  
**Acute Crustaceans Toxicity:** Not Determined  
**Acute Algae Toxicity:** Not Determined

**Chemical Fate Information:** Not Determined

**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)

## 14. TRANSPORTATION INFORMATION

<b>DOT:</b>	
<b>DOT Status:</b>	REGULATED MATERIAL.
<b>DOT Shipping Name:</b>	ORGANIC PEROXIDE TYPE E, SOLID, (n-BUTYL-4,4-DI-[t-BUTYLPEROXY] VALERATE, 40%)
<b>UN/NA Number:</b>	UN3108
<b>Hazard Class:</b>	5.2
<b>DOT Packing Group:</b>	II
<b>ERG#:</b>	145
<b>ICAO/IATA:</b>	
<b>Status:</b>	REGULATED MATERIAL.
<b>Proper Shipping Name:</b>	ORGANIC PEROXIDE TYPE E, SOLID, (n-BUTYL-4,4-DI-[t-BUTYLPEROXY] VALERATE, 40%)
<b>UN/NA Number:</b>	UN3108
<b>IATA-DGR Class:</b>	5.2
<b>Packing Group:</b>	None
<b>IMDG:</b>	
<b>Status:</b>	REGULATED MATERIAL.
<b>Proper Shipping Name:</b>	ORGANIC PEROXIDE TYPE E, SOLID, (n-BUTYL-4,4-DI-[t-BUTYLPEROXY] VALERATE, 40%)
<b>UN/NA Number:</b>	UN3108
<b>Hazard Class:</b>	5.2
<b>Packing Group:</b>	None
<b>EMS No.:</b>	F-J, S-R
<b>Flash Point (°F/°C)</b>	Not Determined

## 15. REGULATORY INFORMATION

### International Inventories:

<b>USA TSCA Inventory Status:</b>	All of the components of this product are listed on the US EPA TSCA Inventory, or exempt from listing.
<b>Canadian DSL:</b>	All of the components of this product are listed on the Canadian Domestic Substances List.
<b>Canadian NDSL:</b>	Some of the components of this product are not found on the Canadian Non-Domestic Substances List.
<b>European - EINECS:</b>	All of the components of this product are listed on EINECS, or exempt from notification.
<b>European - ELINCS.</b>	All of the components of this product are not listed on ELINCS.
<b>EU - No-Longer Polymers List:</b>	None of the components of this product are listed on the EUNLP.
<b>Japanese Chemical Inventory:</b>	All of the components of this product are listed on the JPENCS Inventory.
<b>Philippines Chemical Inventory:</b>	All of the components of this product are found on the Philippines Inventory.
<b>Australian Chemical Inventory:</b>	All of the components of this product are listed on the Australian Chemical Inventory.
<b>Korean Chemical Inventory:</b>	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.)

**Butyl 4,4-di-(tert-butylperoxy)-valerate** 40-42 995-33-5  
**New Jersey Right-to-Know List:** Listed

**Silica** 34-35 7631-86-9  
**New Jersey Right-to-Know List:** Listed  
**Pennsylvania Right to Know List:** Listed  
**Massachusetts Right to Know Law:** Listed  
**Minnesota 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:** This product does not contain any ingredients subject to the reporting requirements of SARA Title III, Section 313 (40 CFR Part 372).

<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:** 114550 PD

**Revision Date:** 03/08/2004

**Additional Information:** None.

**Important Note:** The information herein is given in good faith but no warranty, expressed or implied, is made.

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