



G E O<sup>®</sup>  
SPECIALTY CHEMICALS

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

## Product Data

### **DI-CUP<sup>®</sup> 40C Dicumyl Peroxide** Vulcanizing Agent and Crosslinking Agent

**DI-CUP<sup>®</sup> 40C** dicumyl peroxide is a free flowing, off white powder that consists of approximately 40% active dicumyl peroxide supported on precipitated calcium carbonate. **Di-Cup<sup>®</sup> 40C** is used as a crosslinking agent in the rubber and plastics industries, where compounds containing it are normally processed at temperatures up to 250°F (121°C) and cured at temperatures above 300°F (149°C).

#### General Sales Specifications

Test Methods are available on request

Assay, Dicumyl peroxide, weight % (by Iodine Liberation)	39.5 - 41.5
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#### Typical Properties

Specific gravity at 25/25°C	1.6
Bulk density (lbs/cu. ft.)	30
Melting point, °F (°C)	86 - 95 (30 - 35)

#### Outstanding Characteristics

**Di-Cup<sup>®</sup> 40C** dicumyl peroxide is used as a crosslinking agent in the rubber and plastics industries. The use of **Di-Cup<sup>®</sup>** stems from its ability to decompose and form free radicals, which, in turn promote crosslinking. Peroxide cures result in crosslinks of strong carbon to carbon bonds between adjacent polymer chains without the insertion of sulfur atoms that occur with conventional sulfur vulcanization.

Peroxide vulcanizates exhibit little or no added color, are stable to oxidation, and exhibit higher compression set resistance than sulfur cured vulcanizates. Complete information about its utility can be found in Technical Bulletins ORC-101 (Fundamentals of Crosslinking) and ORC-201M (Di-Cup<sup>®</sup> Dicumyl Peroxide Vulcanizing Agent and Crosslinking Agent).

#### Product Handling

Tests have shown that **Di-Cup<sup>®</sup> 40C** may agglomerate if stored above 100°F (38°C). At or above this temperature, however, the active dicumyl peroxide component will melt and on cooling, the peroxide will solidify and may form lumps that are difficult to disperse.

**Soluble** at practical concentrations, **Di-Cup<sup>®</sup> 40C** is soluble in vegetable oil and many organic compounds. It is readily dispersible in natural and synthetic rubber compounds, silicone gums, and polyester resins. It is insoluble in water.

### **Typical Uses**

**Di-Cup® 40C** can be used to cross-link most polymers, including unsaturated or halogenated elastomers and thermoplastic resins.

**Available Forms:** Fiber drum, 6 1/2 gal (25 lbs net wt). Fiber drum, 25 gal (100 lbs net wt). See MSDS for additional property and handling information.

### **Storage and Inventory Control**

It is strongly recommended that strict control of inventory be observed at all time, taking care that the oldest material is used first. Keep container closed when not in use. Store in a cool, dry, well ventilated area. Do not store near flammable materials. Avoid storing product near incompatible materials (see MSDS Sections 7 and 10). Keep away from heat, flame, sparks and other ignition sources. Do not store in direct sunlight.

### **Safety Guidelines**

Commercial use of **Di-Cup® 40C** requires that it decompose at a temperature dependent rate. At temperatures below 131°F (55°C), **Di-Cup® 40C** can be held for several days without significant decomposition or assay loss. However, the handling temperature of **Di-Cup® 40C** should never exceed 131°F (55°C), because above this temperature the rate of thermal decomposition and heat evolution can increase rapidly and violent decomposition may occur.

### **Product Safety**

Read and understand the Material Safety Data Sheet (MSDS) before using this product.

### **North American Regulatory Compliance**

**DI-CUP® 40C** Dicumyl Peroxide is in compliance with requirements of the U.S. Food and Drug Administration (FDA) for use as specified in the Code of Federal Regulations, Title 21, subject to the limitations and requirements of each regulation under the following Section(s):

175.105                      Adhesives

### **European Regulatory Compliance**

**DI-CUP® 40C** Dicumyl Peroxide is in compliance with the requirements of the Bundesgesundheitsamt für Verbraucherschutz und Veterinärmedizin (BgVV) of the Federal Republic of Germany for use in food packaging and food processing operations as specified in the BgVV Recommendations, under the following Chapters and subject to the provisions therein:

None

**For additional information, and to place an order or sample request, call (888) 519-3883.**

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