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## Powder Promotor MSDS

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### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

	<b>Chemical Description</b> Dibenzoyl peroxide with dicyclohexyl phthalate
	<b>Chemical Formula</b> Mixture
<b>CAS-Number</b> Mixture	<b>Chemical Family</b> Organic Peroxides/Diacyl Peroxides
	<b>Transportation Emergency</b> INFOTRACK-USA 1-800-535-5053
<b>Product Use</b> Polymer initiator	
<b>Date of First Issue</b> 4/14/2003	<b>Date of Issue/Revision</b> 2005-08-17/0.02

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage(s)	CAS Number
Dibenzoyl peroxide	50.00	000094-36-0
Dicyclohexyl phthalate	50.00	000084-61-7

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

White granules with a slight odor.

DANGER!

ORGANIC PEROXIDE.

HEAT OR CONTAMINATION MAY CAUSE HAZARDOUS DECOMPOSITION.

MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION.

MAY CAUSE ALLERGIC SKIN REACTION.

Toxic and flammable vapors may be produced under combustion. Isolate from sources of ignition.

#### Health Effects

Skin and eye contact are the primary routes of exposure to this product.

No toxic effects are expected to be caused by inhalation of fumes or vapors.

Inhalation of powder, dust, or fumes may be irritating to the upper respiratory system.

Skin contact may cause mild irritation and/or allergic reaction in sensitive individuals.

Eye contact may cause mild to moderate irritation.

This product has a low order of toxicity. No significant toxic effects are expected.

#### 4. FIRST AID MEASURES

##### Inhalation

Remove to fresh air. If breathing becomes difficult, oxygen may be given, preferably with a physician's advice. If not breathing, give artificial respiration. Get medical attention.

##### Skin

Remove contaminated clothing and equipment. Wash all affected areas with plenty of soap and water for at least 15 minutes. DO NOT attempt to neutralize with chemical agents. Wash any contaminated clothing before reuse. Obtain medical advice if irritation occurs.

##### EYE

Flush eyes with large quantities of running water for a minimum of 15 minutes. If the victim is wearing contact lenses, remove them. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. DO NOT let the victim rub eye(s). Do not attempt to neutralize with chemical agents. Ointments are not to be used at this time. Get medical attention if eye irritation occurs.

##### Ingestion

Immediately give several glasses of water. DO NOT induce vomiting. If vomiting occurs, keep head below hips to reduce the risk of aspiration. Give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Never give anything by mouth to a person who is unconscious or convulsing.

If victim is unconscious, monitor pulse, breathing, and airway. If breathing stops, begin artificial respiration immediately. If the heart beat has stopped, give cardiopulmonary resuscitation (CPR). Get medical attention immediately.

#### 5. FIRE-FIGHTING MEASURES

##### Flash Point

not determined

##### Autoignition Temperature

not determined

##### Explosion Limits

lower: N/D

upper: N/D

##### Extinguishing Media

Use water fog, dry chemical, carbon dioxide, or foam extinguishing agents. Extinguish large fires with large amounts of water, spray fog, or foam from a safe/protected position.

##### Fire Fighting Procedures

As in any fire, prevent human exposure to fire, smoke, fumes, or products of combustion. Evacuate non-essential personnel from the fire area. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. If possible, move containers from the fire area. If not leaking, keep fire exposed containers cool with water fog or spray to prevent rupture due to excessive heat. High pressure water may spread product from broken containers increasing contamination or fire hazard. Dike fire control water for later disposal. Do not allow contaminated water to enter waterways.

##### Fire and Explosion Hazard

Toxic and flammable vapors may be produced under combustion. Isolate from sources of ignition. This product can produce flammable vapors which may travel to a source of ignition and flash back.

##### Hazardous Products of Combustion

Oxides of carbon and biphenyl (OSHA PEL=1mg/m<sup>3</sup>; ACGIH TLV=1.3mg/m<sup>3</sup>) are produced during the decomposition of this product. Flammable gases and vapors may also be produced during thermal decomposition.

##### NFPA Ratings

Hazard

Rating

Health	2
Flammability	2
Reactivity	2
Other	ND

## 8. ACCIDENTAL RELEASE MEASURES

### Methods for Cleaning up

Remove all sources of ignition from the spill area. Stop all sources of spill. If tools are needed, they should be non-sparking. Dike area to prevent spill from spreading.

Evacuate all non-essential personnel upwind. Any person entering an area of a significant spill or of an unknown concentration of gas or vapor should use a NIOSH-approved, positive-pressure demand, self-contained breathing apparatus. Protective equipment to prevent skin and eye contact should be worn. Soak up spilled material with a suitable absorbent such as clay, sand, or earth. Sweep up absorbed material and place in a chemical waste container for disposal.

## 7. HANDLING AND STORAGE

### Handling

Wear protective clothing when handling this product to avoid eye and skin contact. Wash thoroughly after handling.

Electrically grounded tanks and containers should always be used as non-sparking, electrically grounded hand tools and appliances. Ground or bond to ground all vessels when transferring to prevent the accumulation of static electricity. See National Electric Code. Emptied container may retain product residues. Follow all warnings and precautions even after container is empty.

### Storage

To insure product quality, storage temperatures should not exceed 77 F (25 C). To insure against possible exothermic self-accelerating decomposition, storage temperatures must not exceed 131 F (55 C). This storage temperature is derived from the SADT (see Section 10). Keep containers tightly closed. Store away from reducing agents, strong oxidizers, acids, alkalis and accelerators.

### Maximum Storage Temperature

77.00 F 25.00 C

### General Comments

Containers should not be opened until ready for use. Use clean non-sparking equipment and tools when handling.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Respiratory Protection

Use a NIOSH-approved organic vapor respirator with dust, mist, and fume filters to reduce potential for inhalation exposure if use conditions generate vapor, mist, or aerosol and adequate ventilation (e.g. outdoor or well-ventilated area) is not available. Where exposure potential necessitates a higher level of protection, use a NIOSH-approved, positive-pressure/pressure-demand, air supplied respirator.

When using respirator cartridges or canisters, they must be changed frequently (following each use or at the end of the work shift) to assure exposure does not occur.

### Skin Protection

Skin contact with liquid or its aerosol should be minimized through the use of suitable protective clothing, gloves, and footwear selected with regard for use condition exposure potential.

### Eye Protection

Because eye contact with this product may cause irritation, chemical goggles and/or face shield should be worn when handling this product.

<b>Ventilation Protection</b> Local exhaust ventilation, enclosed system design, continuous monitoring devices, process isolation and remote control are traditional exposure control techniques which may be used to effectively minimize employee exposure.
<b>Other Information</b> Safety showers, with quick opening valves which stay open, and eye wash fountains, or other means of washing the eyes with a gentle flow of cool tepid tap water, should be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze ups in cold weather.
<b>Applicable Exposure Limits</b> Available exposure limits applicable to this product are shown below.

Agency	Value/unit of Measurement
<b>Dibenzoyl Peroxide</b>	
OSHA TLV/TWA	5.000 mg/m <sup>3</sup>
ACGIH TLV/TWA	5.000 mg/m <sup>3</sup>
NIOSH REL.TWA	5.000 mg/m <sup>3</sup>
PEL=Permissible Exposure Limit TLV=Threshold Limit Value TWA=Time Weighted Average STEL=Short Term Exposure Limit CEIL=Ceiling Exposure Limit REL=Recommended Exposure Limit WEEL=Workplace Environment Exposure Limit IDHL=Immediate Dangerous to Life and Health	

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance and Odor</b> White granules with a slight odor.	<b>pH Value</b> not determined
<b>Odor Threshold (ppm)</b> not determined	<b>Relative Vapor Density (air=1)</b> not determined
<b>Volatile %</b> not determined	<b>Vapor Pressure (mm Hg)</b> not determined
<b>Boiling Point/Range</b> not determined	<b>Evaporation Rate</b> not determined
<b>Melting Point/Range</b> not determined	<b>Pour Point</b> not determined
<b>Cloud Point</b> not determined	<b>Solubility in Water</b> Insoluble
<b>Flash Point</b> not determined	<b>Solubility in Other Solvents</b> not determined

<b>Autoignition Temperature</b> not determined	<b>Partition Coefficient n-octanol/water</b> not determined
<b>Density</b> not determined	<b>Bulk density</b> not determined
<b>Other Information</b> SADT= 140 F (60 C) (See Section 10).	<b>Explosion Limits</b> Lower: N/D Upper: N/D

## 10. Stability And Reactivity

<b>Stability</b>
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This product is stable at ambient temperatures but may decompose if exposed to temperatures above 131 F (55 C).

**Incompatibilities**

This product is incompatible with strong acids, strong oxidizers, strong bases, metal salts, reducing agents and accelerators.

**Polymerization**

Hazardous polymerization is not expected to occur under normal temperatures and pressures.

**Decomposition**

Decomposition products are carbon dioxide, carbon monoxide, and biphenyl.

**Conditions to Avoid**

The SADT for this product is 140 F (60 C). The SADT (self accelerating decomposition temperature) is an experimentally derived temperature at which typical package of the product will undergo self accelerating decomposition. Decomposition can be expected to be hazardous and uncontrollable. Under no circumstances should this product be exposed to temperatures near or above the emergency temperature of 131 F (55 C). Such an exposure could initiate decomposition. Contact with incompatible materials such as acids, alkalis, heavy metals, and reducing agents will also result in hazardous decomposition.

**11. Toxicological Information**

<b>Oral LD50</b>	Ingestion toxicity data is not available for this product. However, the oral LD50 for a 78% granular Dibenzoyl peroxide product is >5000 mg/kg in rats.
<b>Dermal LD50</b>	Dermal toxicity data is not available for this product. However, it is not considered a primary skin irritant or corrosive to skin based upon tests in rabbits with 78% granular Dibenzoyl peroxide product. 10% Dibenzoyl peroxide in polyethylene glycol was positive in a human skin sensitization study.
<b>Inhalation LC50</b>	Inhalation toxicity data is not available for this product. However, a 78% wet Dibenzoyl peroxide product when tested in rats had an LC50>24.3 mg/L after a 4 hour exposure.
<b>Skin</b>	Chronic dermal exposure effects for this product are not known. However, prolonged and/or repeated contact is expected to cause mild irritation, defatting, dermatitis, and may cause sensitization.

<b>Eye</b>	The acute eye effects of this product have not been determined. However, a 78% granular dibenzoyl peroxide product was a slight irritant to rabbit eyes (5 minutes) and moderate irritant to rabbit eyes (24 hours).
<b>Chronic Toxicity/Carcinogenicity</b>	Chronic ingestion effects of this product are not known. Prolonged and/or repeated inhalation may cause respiratory tract irritation. While this product has not been evaluated for genetic activity, a 78% granular Dibenzoyl peroxide product gave negative results in the Ames test, Chromosome Aberration Assay, and the Mouse Dominant Lethal test. The reproductive toxicity of this product is not known. The neurotoxic effects of this product are not known. Overexposure to this product may affect the skin, eyes, and respiratory

	system.
<b>Other Toxicological Information</b>	No other toxic effects for this product are known.

**12. ECOLOGICAL INFORMATION**

<b>Ecotoxicological Information</b>	The ecological toxicity of this product is not known.
<b>Bioaccumulation</b>	Chemical fate information on this product is not known.
<b>Other Information</b>	Other ecological information on this product is not known

**13. DISPOSAL CONSIDERATIONS**

<b>Waste Disposal in Accordance With Regulations</b>
The characteristic of reactivity per RCRA would be exhibited by the unused product if it becomes a waste material. The EPA Hazardous Number of D003 would be applicable.

**14. TRANSPORT INFORMATION**

<b>Shipping Description</b>	ORGANIC PEROXIDE TYPE D, SOLID (DIBENZOYL PEROXIDE, 50%) 5.2, UN3106, PG II North American Emergency Response Guide No:145
<b>Required Labels</b>	ORGANIC PEROXIDE
<b>Environmentally Hazardous Substance</b>	This product does not contain an environmentally hazardous substances per 49 CFR 172.101, Appendix A

**15. REGULATORY INFORMATION****Products and/or Components Listed Below are Subject to the Following**

<b>Dibenzoyl Peroxide</b>	
Massachusetts Substance List	Yes
New Jersey R-T-K Hazard. Sub.	Yes
Penn. Hazardous Substance List	Yes
SARA Title III, Section 313	Yes
Toxic Subst. Cont. Act-listed	Yes
Domestic Substance List-Canada	Yes

<b>Dicyclohexyl phthalate</b>	
Toxic Subst. Cont. Act-listed	Yes
Domestic Substance List-Canada	Yes

<b>Hazard Classes</b>	
<b>Description</b>	<b>Applicable</b>
HMIS Hazard Rating Source	HMIS
HMIS Health	2
HMIS Flammability	2
HMIS Reactivity	2
WHMIS Hazard Classes	C; D-28; F

<b>Other Regulatory Information</b>
No other regulatory information is available on this product.

**16. OTHER INFORMATION**

<b>Created by</b>
PRODUCT SAFETY 914-674-5000

The information in this material safety data sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. However, no warranty is made as to the accuracy of and/or sufficiency of such information and/or suggestions as to the merchantability or fitness of the product for any particular purpose, or that any suggested use will not infringe any patent. Nothing in here shall be construed as granting or extending any license under any patent. Buyer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date on this document is more than three years old, call to make certain this sheet is still current.