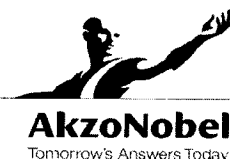


# Material safety data sheet



## PERKADOX CH-50

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<b>Product label name</b> Dibenzoyl peroxide, powder, 50% with dicyclohexyl phthalate	
<b>Supplier</b> Akzo Nobel Polymer Chemicals LLC 525 West Van Buren Street Chicago, IL 60607-3823  www.akzonobel.com/polymer	
<b>Emergency telephone</b> +1-914-693-6946 Chicago, IL USA	<b>transportation emergency</b> CHEMTREC - USA: 1-800-424-9300 CANUTEC - CANADA: 1-613-996-6666
<b>Relevant identified uses of the substance or mixture</b> Curing agent	
<b>Date of last issue / Revision number</b> 2012-07-02 / 2.00	
<b>Chemical family</b> peroxides	

### 2. HAZARDS IDENTIFICATION

<b>Emergency overview</b> <b>DANGER!</b> ORGANIC PEROXIDE HEAT OR CONTAMINATION MAY CAUSE HAZARDOUS DECOMPOSITION CAUSES EYE IRRITATION MAY CAUSE ALLERGIC SKIN REACTION VERY TOXIC TO AQUATIC ORGANISMS Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined. Dust explosion possible in the presence of air.	
<b>Appearance</b> white powder with faint odor.	
<b>Health effects</b> Skin and eye contact are the primary routes of exposure to this product. Dust may be irritating to the respiratory tract and cause symptoms of bronchitis May cause sensitization by skin contact. Irritating to eyes.	
<b>Carcinogenicity</b>	
<b>Description</b>	<b>Applicable</b>
IARC	no
NTP	no
OSHA	no
ACGIH	no

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on hazardous ingredients
<b>Chemical description</b> Dibenzoyl peroxide, powder, 50% with dicyclohexyl phthalate
<b>Composition / information on ingredients</b>

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Number	% w/w	CAS-number	Chemical name
1	40 - 55	000084-61-7	Dicyclohexyl phthalate
2	49 - 51	000094-36-0	

**Other information**  
 This material is classified as hazardous under OSHA regulations.

### 4. FIRST AID MEASURES

**Most important symptoms and effects**  
 Irritating to eyes. May cause sensitization by skin contact. Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.

**Description of first aid measures**

<b>General</b> In all cases of doubt, or when symptoms persist, seek medical attention.
<b>Inhalation</b> Remove to fresh air. If not breathing, give artificial respiration. Oxygen may additionally be given, by trained personnel, if it is available. Get medical attention if symptoms occur.
<b>Skin</b> Immediately wash skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
<b>Eye</b> Immediately flush eyes with plenty of water. If easy to do, contact lenses should be removed during the flushing, by trained personnel. Hold the eyelids apart during the flushing to ensure rinsing the entire surface of the eye and lids with water. Get medical attention if irritation persists.
<b>Ingestion</b> Call a physician or a poison control center immediately. Induce vomiting only if directed by medical personnel. The patient should lie on their left side while vomiting to reduce the risk of aspiration. Never give anything by mouth to an unconscious or convulsing person.

**Indication of any immediate medical attention and special treatment needed**  
 Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material.  
 Attending physician should treat exposed patients symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media**  
 waterspray, foam, sand, dry chemical powder, CO2.

**Unsuitable extinguishing media**  
 halons .

**Hazardous decomposition / combustion products**  
 CO2, Carbon monoxide.  
 Benzoic acid, Benzene.

**Protective equipment**  
 Firefighters must wear fire resistant protective equipment. Wear approved respirator and protective gloves.

**Other information**  
 Evacuate all non-essential personnel. Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water. Water used to extinguish a fire should not be allowed to enter the drainage system or water courses. After a fire, ventilate thoroughly the area and soak with water, clean the walls and metallic surfaces.

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## PERKADOX CH-50

**Fire and explosion hazard**  
 CAUTION: reignition may occur. Decomposition under effect of heating (See also Section Hazardous decomposition products). If involved in a fire, it will support combustion. dust explosion hazard. In case of fire and/or explosion do not breathe fumes.

NFPA ratings	
Hazard classes	Rating
Health	2
Flammability	2
Reactivity	3

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**  
 Do not breathe dust. Avoid contact with skin and eyes. For personal protection see Section 8.

**Environmental precautions**  
 Do not allow to enter drains or water courses.

**Methods and material for containment and cleaning up**  
 Stop leakage if possible. Eliminate all sources of ignition, and do not generate flames or sparks. Sweep up and put it into a container for disposal. Avoid dust generation. Keep contents moist. The waste should NOT be confined. Flush surroundings with large amounts of water and soap.

**Other information**  
 CAUTION: reignition may occur. Evacuate personnel to safe area.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**  
 Never weigh out in the storage room. When using do not eat, drink or smoke. Do not breathe dust. Handle in well ventilated areas. Eliminate all sources of ignition, and do not generate flames or sparks. Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps). Keep product and emptied container away from heat and sources of ignition. Confinement must be avoided. Do not allow to dry out. Avoid contact with skin and eyes. Avoid Incompatible materials (See Section 10).

**Fire and explosion prevention**  
 Avoid dust generation. Dust explosion possible in the presence of air. Use non-sparking tools in area's where explosive dust air mixtures may occur. Do not cut or weld on or near this container even when empty.

**Conditions for safe storage**  
 Store in accordance with local/national regulations. Keep away from food, drink and animal feedingstuffs. Store in a dry well ventilated place away from sources of heat and direct sunlight. Store separate from other chemicals. Keep only in the original container.

**Storage**  
 For maximum quality store below: 25 °C.

**Other information**  
 It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded. Wash hands thoroughly after handling or contact. Keep work clothes separate and do not take them home .

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**  
 Ensure good ventilation and local exhaustion of the working area. Explosion proof ventilation recommended.

**Personal protection**

**Respiratory**  
 Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment (respirator with Filter P1).

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<b>Hand</b> Wear suitable protective gloves of neoprene or synthetic rubber.	
<b>Eye</b> Wear eye/face protection.	
<b>Skin and body</b> Wear suitable protective clothing.	
<b>Other information</b> Emergency-shower and facilities for rinsing eyes must be accessible. Launder clothes before reuse.	

OSHA TLV/TWA	5 mg/m <sup>3</sup>
ACGIH TLV/TWA	5 mg/m <sup>3</sup>
NIOSH REL/TWA	5 mg/m <sup>3</sup>
NIOSH IDLH	1500 mg/m <sup>3</sup>

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b> powder	
<b>Color</b> white	
<b>Odor</b> faint	
<b>Boiling point/range</b> not applicable (Decomposes)	
<b>Melting point/freezing point</b> Decomposes prior to melting.	
<b>Flash point</b> not applicable	
<b>Flammability</b> Decomposition products may be flammable.	
<b>Explosive properties</b> no	
<b>Oxidizing properties</b> not applicable	
<b>Vapor pressure</b> not applicable	
<b>Density</b> 1230 kg/m <sup>3</sup> (20°C / 68°F) Specific gravity = 1.23 (20°C / 68°F)	
<b>Bulk density</b> 640 kg/m <sup>3</sup> (20°C / 68°F)	
<b>Solubility in water</b> Insoluble (20°C / 68°F)	
<b>Solubility in other solvents</b> not determined	
<b>pH value</b> not determined	

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<b>Partition coefficient n-octanol/water</b> not determined	
<b>Relative vapor density (air=1)</b> not applicable	
<b>Viscosity</b> not applicable	
<b>Active oxygen content</b> 3.3%	
<b>Peroxide content</b> 49-51%	
<b>Autoignition temperature</b> Test method not applicable (See Section 7)	
<b>SADT</b> 55 °C. See also Section 10.	
<b>Upper/lower flammability or explosive limits</b> not determined	
<b>Volatile %</b> not determined	

### 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	
SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the following temperature: 55 °C. Contact with incompatible substances can cause decomposition at or below the SADT 55 °C.	
<b>Conditions to avoid</b>	
To maintain quality store in original closed container below: 25 °C.	
Avoid shock and friction. Confinement must be avoided.	
<b>Incompatible materials</b>	
Avoid contact with rust, iron and Copper. Contact with incompatible materials such as acids, alkalies, heavy metals and reducing agents will result in hazardous decomposition. Do not mix with peroxide accelerators. Use only Stainless steel 316, PP, polyethylene or glass-lined equipment. Contact Akzo Nobel for more information.	
<b>Possibility of hazardous reactions</b>	
Polymerization does not occur.	
<b>Hazardous decomposition products</b>	
Hazardous decomposition products; Benzoic acid, Benzene.	
<b>Other information</b>	
Emergency procedures will vary depending on conditions. The customer must have an emergency response plan in place. Contact Akzo Nobel for assistance with developing an emergency response plan.	

### 11. TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation as such available. The following data are applicable to the ingredient(s) listed below.	
<b>Dibenzoyl peroxide, 78%</b>	
<b>Acute toxicity</b>	
<b>Oral LD50</b> >5000 mg/kg (rat)	

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<b>Inhalation LC50</b> >24300 mg/m <sup>3</sup> (rat), dust	
<b>Irritation</b>	
<b>Skin</b> Minimally irritating	
<b>Eye</b> Irritating to eyes. (rabbit)	
<b>Sensitization</b> Sensitizing (skin)	
<b>Genotoxicity</b> No evidence of genotoxic effects in vivo. No evidence of genotoxic effects in vitro.	
<b>Carcinogenicity / Mutagenic data</b> not carcinogenic	
<b>Chronic toxicity / Carcinogenicity</b> 29 days, No Observed Adverse Effect Level (NOAEL); 1000 mg/kg/day  No Observed Adverse Effect Level (NOAEL); 500 mg/kg/day (oral)	

## 12. ECOLOGICAL INFORMATION

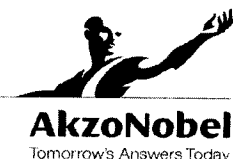
No experimental ecological data are available on the preparation as such. The following data are applicable to the ingredient(s) listed below.	
<b>Dibenzoyl peroxide, 78%</b>	
<b>Ecotoxicity</b>	
<b>fish</b> 96h-LC50: 0.06 mg/l	
<b>daphnia</b> 48h-EC50: 0.11 mg/l (Daphnia magna)	
<b>algae</b> 72h-EC50: 0.06 mg/l	
<b>bacteria</b> Activated sludge respiration inhibition test EC50: 35 mg/l	
<b>Fate</b>	
<b>Degradation Abiotic</b> Half-life : 2.4 hours at 50°C	
<b>Degradation Biotic</b> Inherently biodegradable.	
<b>Bioaccumulation</b> Bio Concentration Factor (BCF): 66.6	
<b>Fate</b> Koc = 3.8 at 22 °C	
<b>Other information</b> Very toxic to aquatic organisms.	

## 13. DISPOSAL CONSIDERATIONS

<b>Product</b> Due to the high risk of contamination recycling/recovery is not recommended. Waste disposal in accordance with regulations (most probably controlled incineration).	
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<b>Contaminated packaging</b> According to local regulations. Emptied container might retain product residues. Follow all warnings even after the container is emptied. Do not wash residues into drains or other waterways.
<b>Other information</b> For further advice contact manufacturer.

### 14. TRANSPORT INFORMATION

<b>Land transport</b>
<b>Transport hazard class</b> 5.2
<b>TREM-Card or ERG number</b> NA ERG No. 145
<b>UN number</b> 3106
<b>Proper Shipping Name</b> Organic peroxide type D, solid ( Dibenzoyl peroxide, 50% )
<b>Other information</b> This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.
<b>Required labels</b> 5.2

<b>Sea transport (IMO / IMDG-code)</b>
<b>Transport hazard class</b> 5.2
<b>UN number</b> 3106
<b>EMS</b> F-J, S-R
<b>Marine pollutant</b> yes
<b>Proper Shipping Name</b> Organic peroxide type D, solid ( Dibenzoyl peroxide )
<b>Other information</b> Label(s): 5.2

<b>Air transport (ICAO-TI / IATA-DGR)</b>
<b>UN number</b> 3106
<b>Transport hazard class</b> 5.2
<b>Proper Shipping Name</b> Organic peroxide type D, solid ( Dibenzoyl peroxide )
<b>Other information</b> Label(s); 5.2

### 15. REGULATORY INFORMATION

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Product and or components listed below are subject to the following	
<b>Dicyclohexyl phthalate</b>	
CERCLA Hazardous Substance	yes
New Jersey R-T-K Hazard. Sub.	yes
Penn. Hazardous Substance list	yes
US Toxic Subst. Cont. Act (TSCA)	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes
California Hazardous Substances	yes
Connecticut Hazardous Material Survey	yes
Illinois Toxic Substances Disclosure to Es	yes
Massachusetts Substance List	yes
New Jersey R-T-K Hazard. Sub.	yes
Penn. Hazardous Substance list	yes
SARA Title III, Section 313	yes
US Toxic Subst. Cont. Act (TSCA)	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes
California Hazardous Substances	yes
Connecticut Hazardous Material Survey	yes
Illinois Toxic Substances Disclosure to Es	yes
Minnesota Hazardous Substance	yes
Rhode Island Hazardous Substances	yes

Hazard classes	
Description	Applicable
EPA Immediate health	yes
EPA Delayed health	no
EPA Fire	yes
EPA Pressure	no
EPA Reactive	yes
EHS Material	yes
Hazard Rating Source	HMIS
HMIS Health	2
HMIS Flammability	2
HMIS Reactivity	3

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Product code 866171

Date of last issue 2012-07-02

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not file generated 2012-07-02

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WHMIS Hazard classes	C,D-2B,F				

**Other regulatory information**  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

### 16. OTHER INFORMATION

<b>History</b>	
<b>Other information</b>	PERKADOX: This is a registered trademark of Akzo Nobel Chemicals BV or any of its affiliated companies in one or more territories in the world.
<b>Date of printing/ pdf file generated</b>	2012-07-05
<b>Revision</b>	2.00
<b>Composed by</b>	Regulatory Affairs- Europe. Regulatory Affairs - North America , T +1-312-544-7000.
<b>Changes were made in section</b>	2 (Classification); 3 (Classification); 15 (Classification)

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