



SAFETY DATA SHEET

PERKADOX BTW-50

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

Product label name Dibenzoyl peroxide, paste, 50% in dipropylene glycol dibenzoate*	
Supplier Akzo Nobel Polymer Chemicals LLC 525 West Van Buren Street Chicago, IL 60607-3823 www.akzonobel-polymerchemicals.com	
Emergency telephone + 1-914-693-6946 Dobbs Ferry, NY USA	transportation emergency CHEMTREC - USA: 1-800-424-9300 CANUTEC - CANADA: 1-613-996-6666
Intended use Curing agent	
Date of last issue / Revision # 2007/06/01 / 1.01	
Chemical family peroxides	

2. HAZARDS IDENTIFICATION

Emergency overview DANGER! ORGANIC PEROXIDE REFRIGERATED PRODUCT - MAINTAIN COOLING HEAT OR CONTAMINATION MAY CAUSE HAZARDOUS DECOMPOSITION COMBUSTIBLE LIQUID AND VAPOR CAUSES EYE IRRITATION MAY CAUSE SKIN SENSITIZATION TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined.	
Appearance white paste with faint odor.	
Health effects Skin and eye contact are the primary routes of exposure to this product. Inhalation may cause irritation of the nose, throat and lungs. May cause mild skin irritation. May cause sensitization by skin contact. Eye contact may cause moderate irritation.	
Carcinogenicity	
Description	Applicable
IARC	no
NTP	no
OSHA	no
ACGIH	no

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on hazardous ingredients
Chemical description Dibenzoyl peroxide, paste, 50% in Dipropylene glycol dibenzoate
Composition / information on ingredients



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Number	% w/w	CAS-number	Chemical name
1	50	000094-36-0	Dibenzoyl peroxide
2	20 - 30	027138-31-4	Dipropylene glycol dibenzoate
3	0.5 - 1.5	000557-05-1	zinc distearate
4	10 - 30	007732-18-5	Water

4. FIRST AID MEASURES

Symptoms and effects Irritating to eyes. May cause sensitization by skin contact.
First aid
General In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation 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.
Skin 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.
Eye 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.
Ingestion 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.
Advice to physician 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 Carbon dioxide, dry chemical powder, dry sand, water, foam.
Unsuitable extinguishing media halones.
Hazardous decomposition / combustion products CO ₂ , 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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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. Vapours may form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes.

NFPA ratings	
Hazard classes	Rating
Health	2
Flammability	2
Reactivity	2
Other information	OX

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with skin and eyes. For personal protection see Section 8.

Environmental precautions

Do not allow to enter drains or water courses.

Methods for cleaning up

Stop leakage if possible. Eliminate all sources of ignition, and do not generate flames or sparks. Transfer remaining product from leaking container to a clean and suitable container. Cover the remainder with inert absorbent (e.g. vermiculite) for disposal. Keep contents moist. The waste should NOT be confined. Flush surroundings with large amounts of water.

Other information

CAUTION: reignition may occur. Evacuate personnel to safe area.

7. HANDLING AND STORAGE

Handling

Never weigh out in the storage room. When using do not eat, drink or smoke. Do not breathe fumes/vapour. 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, alkalis 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

Use explosion protected equipment. Keep away from sources of ignition - No smoking. Do not cut or weld on or near this container even when empty.

Storage requirements

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. Keep container upright to prevent leakage.

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 working clothing separately and do not take them home.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

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



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Personal protection	
Respiratory	Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment (respirator with Filter P1).
Hand	Wear suitable protective gloves of neoprene or synthetic rubber.
Eye	Wear eye/face protection.
Skin and body	Wear suitable protective clothing.
Other information	Emergency-shower and facilities for rinsing eyes must be accessible. Launder clothes before reuse.

Dibenzoyl peroxide			
OSHA TLV/TWA		5 mg/m ³	
ACGIH TLV/TWA		5 mg/m ³	
NIOSH REL/TWA		5 mg/m ³	
NIOSH IDLH		1500 mg/m ³	
zinc distearate			
OSHA TLV/TWA		10 mg/m ³	total dust.
OSHA TLV/TWA		5 mg/m ³	respirable dust fraction.
NIOSH REL/TWA		10 mg/m ³	total.
NIOSH REL/TWA		5 mg/m ³	Respirabel dust

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	paste
Color	white
Odor	faint
Boiling point/range	not applicable (Decomposes)
Melting point/range	not determined
Flash point	Above the SADT value.
Flammability	Decomposition products may be flammable.
Explosive properties	no
Oxidizing properties	not applicable
Vapour pressure	not determined
Density	1200 kg/m ³ (20°C / 68°F) Specific gravity = 1.20 (20°C / 68°F)



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Solubility in water Partly soluble in water (20°C / 68°F)
Solubility in other solvents not determined
pH value not determined
Partition coefficient n-octanol/water not determined
Relative vapour density (air=1) Dipropyleneglycol dibenzoate at 20°C / 68°F : 10.8
Viscosity thixotropic paste (20°C / 68°F)
Active oxygen content 3.25 %
Peroxide content 50 %
Autoignition temperature Test method not applicable (See Section 7)
SADT 50 °C. See also Section 10.
Explosion limits not determined
Volatile % not determined

10. STABILITY AND REACTIVITY

Stability 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: 50 °C. Contact with incompatible substances can cause decomposition at or below the SADT 50 °C.
Conditions to avoid To maintain quality store in original closed container below: 25 °C. Avoid shock and friction. A high degree of confinement must be avoided.
Incompatibles 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, PVC, polyethylene or glass-lined equipment.
Polymerization Polymerization does not occur.
Hazardous decomposition products Hazardous decomposition products; Benzoic acid, Benzene.
Other information 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



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No experimental toxicological data on the preparation as such available. The following data are applicable to the ingredient(s) listed below.

Dibenzoyl peroxide, 78 %

Acute toxicity

Oral LD50

rat: > 5000 mg/kg

Inhalation LC50

rat: > 24.3 mg/l ; 4 hours exposure time max. attainable concentration

Irritation

Skin

Non-irritating (4 hours exposure time)

Eye

Moderately irritating

Sensitization

Sensitization possible by skin contact

Genotoxicity

Ames test: Not mutagenic

Dipropylene glycol dibenzoate

Acute toxicity

Oral LD50

No data available

Irritation

Eye

Irritating to eyes.

zinc distearate

Acute toxicity

Oral LD50

oral LD50 rat >5 g/kg

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.

Dibenzoyl peroxide, 78 %

Ecotoxicity

fish

Acute toxicity, 96h-LC50 = 2.0 mg/l. (*Poecilia reticulata*.)

daphnia

48 h-EC50 : 2.91 mg/l

bacteria

Activated sludge respiration inhibition test EC50 = 35 mg/l.

Fate

Degradation Biotic

Readily biodegradable (Closed bottle test).

zinc distearate

Ecotoxicity



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Bioaccumulation Biodegradable

13. DISPOSAL CONSIDERATIONS

Product Due to the high risk of contamination recycling/recovery is not recommended. Waste disposal in accordance with regulations (most probably controlled incineration).
Contaminated packaging 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.
Other information For further advice contact manufacturer.

14. TRANSPORT INFORMATION

<i>Land transport</i>
Class 5.2
TREM-Card or ERG number NA ERG No. 145
UN number 3108
Proper Shipping Name Organic peroxide type E, solid (Dibenzoyl peroxide , 50%)
Other information This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.
Required labels 5.2

<i>Sea transport (IMDG-code / IMO)</i>
Class 5.2
UN number 3108
EMS F-J, S-R
Marine pollutant no
Proper Shipping Name Organic peroxide type E, solid (Dibenzoyl peroxide)
Other information Label(s): 5.2

<i>Air transport (ICAO-TI / IATA-DGR)</i>
UN number 3108
Class 5.2



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Proper Shipping Name Organic peroxide type E, solid (Dibenzoyl peroxide)
Other information Label(s); 5.2




15. REGULATORY INFORMATION

Product and or components listed below are subject of the following	
Dibenzoyl peroxide	
IARC Carcinogens-Grps. 1,2A,2B	
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
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
Dipropyleneglycol dibenzoate	
Toxic Subst. Cont. Act -listed	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes
zinc distearate	
CERCLA Hazardous Substance	yes
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
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
Water	
Toxic Subst. Cont. Act -listed	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes



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

History
Other information 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.
Date of printing/ pdf file generated 2008/01/29
Revision 1.01
Composed by N. Shoshenskiy, Regulatory Affairs - North America. J.W. Wessels - Regulatory Affairs - Europe.
Changes were made in section 1, 2, 3, 15 Classification
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