

PERKADOX 14-40K-PD

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

Product label name Di(tert-butylperoxyisopropyl)benzene, powder, 40% on clay and silica	
Supplier Akzo Nobel Polymer Chemicals LLC 525 West Van Buren Street Chicago, IL 60607-3823 www.akzonobel.com/polymer	
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 cross-linking agent	
Date of last issue / Revision number 2008/12/03 / 2.60	
Chemical family peroxides	

2. HAZARDS IDENTIFICATION

Emergency overview DANGER! ORGANIC PEROXIDE HEAT OR CONTAMINATION MAY CAUSE HAZARDOUS DECOMPOSITION COMBUSTIBLE LIQUID AND VAPOR CAUSES EYE IRRITATION MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION May cause fire.	
Appearance off white fine powder with faint odor.	
Health effects Skin contact, eye contact and inhalation are the primary routes of exposure to this product. Irritating to eyes.	
Carcinogenicity	
Description	Applicable
IARC	no
NTP	no
OSHA	no
ACGIH	no

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on hazardous ingredients			
Chemical description Di(tert-butylperoxyisopropyl)benzene, powder, 40% on clay and silica			
Composition / information on ingredients			
Number	% w/w	CAS-number	Chemical name
1	40	025155-25-3	Di(tert-butylperoxyisopropyl)benzene

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2	30 - 60	proprietary	Proprietary clay
3	3 - 7	proprietary	Proprietary filler

4. FIRST AID MEASURES

Symptoms and effects
Irritating to eyes.

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

Flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. 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

waterspray, foam, sand, dry chemical powder, CO₂.

Unsuitable extinguishing media

halones.

Hazardous decomposition / combustion products

CO₂, Carbon monoxide.
Methane, tert-Butanol, Acetone, Diacetylbenzene, Bis(2-hydroxyisopropyl)benzene, Acetyl-2-hydroxyisopropyl 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.

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. Vapours may form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes.

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NFPA ratings	
Hazard classes	Rating
Health	1
Flammability	2
Reactivity	2
Other information	

6. ACCIDENTAL RELEASE MEASURES

<p>Personal precautions Do not breathe dust. Avoid contact with eyes. For personal protection see Section 8.</p>
<p>Environmental precautions Do not allow to enter drains or water courses.</p>
<p>Methods for 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.</p>
<p>Other information CAUTION: reignition may occur. Evacuate personnel to safe area.</p>

7. HANDLING AND STORAGE

<p>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. Avoid contact with eyes. Avoid Incompatible materials (See Section 10).</p>
<p>Fire and explosion prevention Use explosion protected equipment. Keep away from sources of ignition - No smoking. 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.</p>
<p>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.</p>
<p>Storage For maximum quality store below: 30 °C.</p>
<p>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.</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<p>Engineering controls Ensure good ventilation and local exhaustion of the working area. Explosion proof ventilation recommended.</p>
<p>Personal protection</p>

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Respiratory In case of dust formation use dust mask.
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.

Proprietary filler		
NIOSH REL/TWA		6 mg/m ³
NIOSH IDLH		3000 mg/m ³

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance fine powder
Color off white
Odor faint
Boiling point/range not applicable (Decomposes)
Melting point/range Decomposes prior to melting.
Flash point not applicable
Flammability Decomposition products may be flammable.
Explosive properties no
Oxidizing properties not applicable
Vapour pressure not applicable
Density 1600 kg/m ³ (20°C / 68°F) Specific gravity = 1.60 (20°C / 68°F)
Bulk density 460 kg/m ³ (20°C / 68°F) Specific gravity = 0.46 (20°C / 68°F)
Solubility in water Insoluble (20°C / 68°F)
Solubility in other solvents Soluble in most organic solvents

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pH value neutral
Partition coefficient n-octanol/water not determined
Relative vapour density (air=1) not applicable
Viscosity not applicable
Active oxygen content 3.8 %
Peroxide content 39-41 %
Autoignition temperature Test method not applicable (See Section 7)
SADT 80 °C. See also Section 10.
Explosion limits not determined
Volatile % 0 %

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: 80 °C. Contact with incompatible substances can cause decomposition at or below the SADT 80 °C.
Conditions to avoid
To maintain quality store in original closed container below: 30 °C.
A high degree of confinement must be avoided.
Incompatibles
Avoid contact with rust, iron and Copper. Contact with incompatible materials such as acids, alkalis, 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 .
Polymerization
Polymerization does not occur.
Hazardous decomposition products
Hazardous decomposition products; Methane, tert-Butanol, Acetone, Diacetylbenzene, Bis(2-hydroxyisopropyl)benzene, Acetyl-2-hydroxyisopropyl 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

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

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1,4-Bis(2-tert-butylperoxyisopropyl)benzene	
Acute toxicity	
Oral LD50	rat:> 5000 mg/kg
Dermal LD50	rat:> 2000 mg/kg
Irritation	
Skin	Mildly irritating
Eye	Mildly irritating
Sensitization	Not sensitizing
Genotoxicity	Ames test: Not mutagenic
Proprietary filler	
Acute toxicity	
Inhalation LC50	1 hours exposure time: >200 mg/m ³ (rat)
Irritation	
Eye	rabbit: Mildly irritating.

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.	
1,4-Bis(2-tert-butylperoxyisopropyl)benzene	
Ecotoxicity	
fish	96h-LC50; 750 mg/l
bacteria	No Observed Effect Concentration (NOEC) >1000 mg/l
Fate	
Degradation Biotic	Expected to be in the following range: Not readily 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.
Other information	For further advice contact manufacturer.

14. TRANSPORT INFORMATION

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Land transport

Proper Shipping Name

Not classified as dangerous for land transport.

Sea transport (IMO / IMDG-code)

Proper Shipping Name

Not classified as dangerous for sea transport.

Air transport (ICAO-TI / IATA-DGR)

Proper Shipping Name




Not classified as dangerous for air transport.

15. REGULATORY INFORMATION

Product and or components listed below are subject of the following	
Di(tert-butylperoxyisopropyl)benzene	
New Jersey R-T-K Hazard. Sub.	yes
Toxic Subst. Cont. Act -listed	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes
Connecticut Hazardous Material Survey	yes
Proprietary clay	
Toxic Subst. Cont. Act -listed	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes
Proprietary filler	
IARC Carcinogens-Grps. 1,2A,2B	
Massachusetts Substance List	yes
New Jersey R-T-K Hazard. Sub.	yes
Penn. Hazardous Substance list	yes
Toxic Subst. Cont. Act -listed	yes
Non-Domestic Subst.List-Canada	no
Domestic Substance List-Canada	yes
California Hazardous Substances	yes
Minnesota Hazardous Substance	yes

Hazard classes	
Description	Applicable
EPA Immediate health	yes
EPA Delayed health	no

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EPA Fire	yes			
EPA Pressure	no			
EPA Reactive	yes			
EHS Material	no			
Hazard Rating Source	HMIS			
HMIS Health	1			
HMIS Flammability	2			
HMIS Reactivity	2			
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.

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2.60

Composed by

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Changes were made in section

1, 2, 3

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 that this sheet is current.