

# SAFETY DATA SHEET

## PERKADOX 26

Version 1

Revision Date 04/26/2015

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US / Z8

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PERKADOX 26

Product Use Description : Polymerization initiator

Company : Akzo Nobel  
Middle East FZE  
AC09 & AC10  
Dubai 262203  
Utd.Arab Emir.

Telephone : +971048862181

Fax : +971048862180

E-mail address : RegulatoryAffairs@akzonobel.com

Emergency telephone : Emergency AkzoNobel Chemicals-Deventer-NL T +31 570 679211

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

|                |                         |
|----------------|-------------------------|
| Appearance     | flakes                  |
| Color          | white                   |
| Odor           | faint                   |
| Hazard Summary | Risk of dust explosion. |

#### GHS Classification

Organic peroxides, Type D  
Skin sensitization, Category 1

#### GHS Label element

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H242 Heating may cause a fire.  
H317 May cause an allergic skin reaction.

Precautionary Statements

: **Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces. -  
No smoking.  
P220 Keep away from dirt, rust, chemicals in particular.

P234 Keep only in original container.  
 P261 Avoid breathing dust or fume.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P410 Protect from sunlight.

P411 Store at temperatures not exceeding 20°C/ 68°F.

P420 Store away from other materials.

**Disposal:**

P501 Dispose of contents/container in accordance with local regulation.

**Potential Health Effects**

|                              |  |
|------------------------------|--|
| Inhalation                   | : Product dust may be irritating to respiratory system.  |
| Skin                         | : Product dust may be irritating to skin.<br>May cause an allergic skin reaction.  |
| Eyes                         | : Product dust may be irritating to eyes.  |
| Ingestion                    | : May be harmful if swallowed.   |
| Aggravated Medical Condition | : None known.  |
| Symptoms of Overexposure     | : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known. |

**Carcinogenicity:**

|       |  |
|-------|--|
| IARC  | : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| OSHA  | : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |
| NTP   | : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                  |
| ACGIH | : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.            |

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous ingredients

| Chemical Name                | CAS-No.    | Classification                            | Concentration [%] |
|------------------------------|------------|---|-------------------|
| Dimyristyl peroxydicarbonate | 53220-22-7 | Org. Perox. D; H242<br>Skin Sens. 1; H317 | 90 - 100          |

Dimyristyl peroxydicarbonate, neat

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this material safety data sheet to the doctor in attendance.
- Inhalation : Remove to fresh air.  
Rinse nose and mouth with water.
- Skin contact : Take off contaminated clothing and shoes immediately.  
Wash the skin immediately with soap and water.  
If skin irritation persists, call a physician.
- Eye contact : Rinse with plenty of water.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- Ingestion : Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.  
Obtain medical attention.

#### Notes to physician

- Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.
- Treatment : Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting / Specific hazards arising from the chemical : CAUTION: reignition may occur.  
Supports combustion.  
Do not use a solid water stream as it may scatter and spread fire.  
Water spray may be ineffective unless used by experienced

firefighters.

Heating may cause decomposition with release of toxic fumes. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

- Combustion products : Fire will produce smoke containing hazardous combustion products (see section 10).
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Use water spray to cool unopened containers.

See also Section 9. Physical and chemical properties: Safety data

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## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Use personal protective equipment.  
Avoid dust formation.  
Avoid breathing dust.  
Ensure adequate ventilation.  
Remove all sources of ignition.
- Environmental precautions : Prevent product from entering drains.
- Methods for cleaning up /  
Methods for containment : Keep wetted with water.  
Soak up with inert absorbent material and dispose of as hazardous waste.  
Confinement must be avoided.  
Pick up and arrange disposal without creating dust.  
Keep in suitable, closed containers for disposal.  
Never return spills in original containers for re-use.
- Additional advice : For personal protection see section 8.

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## 7. HANDLING AND STORAGE

### Handling

- Advice on safe handling : For personal protection see section 8.  
Avoid formation of respirable particles.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Smoking, eating and drinking should be prohibited in the application area.  
Open drum carefully as content may be under pressure.
- Advice on protection against fire and explosion : Use explosion protected equipment.  
Provide appropriate exhaust ventilation at places where dust is formed.  
Keep away from sources of ignition - No smoking.  
No sparking tools should be used.  
Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal

soaps).

Do not cut or weld on or near this container even when empty.  
Keep away from combustible material.

Temperature class : It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded.

### Storage

Requirements for storage areas and containers : No smoking.  
Keep in a dry place.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.  
Store at room temperature in the original container.  
Keep only in original container.  
Store away from other materials.

Maximum storage temperature: : 15 °C (59 °F)

Other data : No decomposition if stored and applied as directed.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Contains no substances with occupational exposure limit values.

### Engineering measures

Explosion proof ventilation recommended.

Provide appropriate exhaust ventilation at places where dust is formed.

### Personal protective equipment

Eye/face protection : Tightly fitting safety goggles

Hand protection : Glove material: butyl-rubber

: Glove material: Neoprene

Skin and body protection : Protective suit

Respiratory protection : Half mask with a particle filter P2 (EN 143)

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

Wash contaminated clothing before re-use.

### Environmental exposure controls

General advice : Prevent product from entering drains.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

|                |                     |
|----------------|---------------------|
| Form           | : flakes            |
| Color          | : white             |
| Odor           | : faint             |
| Odor Threshold | : No data available |

**Safety data**

|  |   |
|--|---|
| pH   | : Weakly acidic   |
| Melting point                                      | : Decomposes before melting.  |
| Boiling point/boiling range                        | : Decomposes below the boiling point.   |
| Flash point  | : Not applicable  |
| Evaporation rate                                   | : Not applicable  |
| Flammability (solid, gas)                          | : Decomposition products may be flammable.  |
| Lower explosion limit                              | : No data available   |
| Upper explosion limit                              | : No data available   |
| Vapor pressure                                     | : Not applicable  |
| Relative vapor density                             | : Not applicable  |
| Relative density                                   | : 1.28 at 20 °C   |
| Bulk density                                       | : 480 kg/m <sup>3</sup> at 20 °C  |
| Water solubility                                   | : at 20 °C<br>insoluble   |
| Solubility in other solvents                       | : No data available   |
| Partition coefficient: n-octanol/water             | : log Pow: 6.5  |
| Autoignition temperature                           | : Test method not applicable  |
| Decomposition temperature                          | : 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 SADT. Contact with incompatible substances can cause decomposition below the SADT. |
| Self-Accelerating decomposition temperature (SADT) | : 35 °C   |

|                       |                                |
|-----------------------|--------------------------------|
| Viscosity, dynamic    | : Not applicable               |
| Viscosity, kinematic  | : Not applicable               |
| Explosive properties  | : Not explosive                |
| Oxidizing properties  | : Not classified as oxidizing. |
| Active Oxygen Content | : 2.98 %                       |
| Organic peroxides     | : > 96 %                       |

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| Conditions to avoid                         | : Confinement must be avoided.<br>Heat, flames and sparks.  |
|   | For safety, store below:<br>15 °C<br>(59 °F)  |
| Materials to avoid                          | : Contact with incompatible materials will result in hazardous decomposition.<br>For queries regarding the suitability of other materials please contact the supplier.<br>Do not mix with peroxide accelerators, unless under controlled processing.<br>Use only stainless steel 316, PP, polyethylene or glass-lined equipment.<br>Acids and bases<br>Iron<br>Copper<br>Reducing agents<br>Heavy metals<br>Rust                                |
| Hazardous decomposition products            | : 1-Tetradecanol<br>Carbon oxides   |
| Thermal decomposition                       | : 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 SADT. Contact with incompatible substances can cause decomposition below the SADT. |
| Reactivity                                  | : Stable under normal conditions.   |
| Chemical stability                          | : Stable under recommended storage conditions.  |
| Hazardous reactions                         | : Dust may form explosive mixture in air.   |
| Self-Accelerating decomposition temperature | : 35 °C (95 °F)   |

(SADT)

**11. TOXICOLOGICAL INFORMATION****PRODUCT INFORMATION:****Toxicology Assessment**

Further information : No further data available

**Carcinogenicity:****IARC** : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**OSHA** : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**NTP** : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**ACGIH** : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.**TOXICOLOGY DATA FOR THE INGREDIENTS:****Test result****Component: Dimyristyl peroxydicarbonate**Acute oral toxicity : LD50: > 2,000 mg/kg  
Species: RatSkin irritation : Species: Rabbit  
Result: No skin irritationEye irritation : Species: Rabbit  
Result: No eye irritationSensitization : Species: Mouse  
Classification: May cause sensitization by skin contact.Repeated dose toxicity : Species: Rat  
Application Route: Oral  
Exposure time: 43 - 48 d ()  
NOEL: > 1,000 mg/kgGerm cell mutagenicity  
Genotoxicity in vitro : Ames test  
Result: negative

Genotoxicity in vivo : Result: Not mutagenic.

Reproductive toxicity/Fertility : Species: Rat, males



Application Route: Oral  
 Dose: 0, 100, 300, 1000 milligram per kilogram  
 General Toxicity Parent: NOAEL (No observed adverse effect level): 1,000 mg/kg body weight/day  
 General Toxicity F1: No observed adverse effect level F1: 1,000 mg/kg body weight/day  
 Fertility: No observed adverse effect level Parent: 1,000 mg/kg body weight/day  
 Method: OECD Test Guideline 422  
 GLP: yes  
 Result: no effects

Target Organ Systemic Toxicant - Repeated exposure : Routes of exposure: Ingestion  
 The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity : No aspiration toxicity classification

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## 12. ECOLOGICAL INFORMATION

### PRODUCT INFORMATION:

#### Ecotoxicology Assessment

Additional ecological information : None known.

#### Further information on ecology

#### Hazardous to the ozone layer

Regulation : 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
 Remarks : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

### INGREDIENTS:

#### Test result

#### Component: Dimyristyl peroxydicarbonate

#### Ecotoxicity effects

Toxicity to fish : LC50: > 1,000 mg/l  
 Exposure time: 96 h  
 Species: Poecilia reticulata (guppy)

Toxicity to daphnia and other aquatic invertebrates : EC50: > 100 mg/l  
 Exposure time: 48 h  
 Species: Daphnia magna (Water flea)

Toxicity to algae : ErC50: > 100 mg/l  
 Exposure time: 72 h  
 Species: Pseudokirchneriella subcapitata (green algae)  
 Test Type: Growth inhibition

Method: OECD Test Guideline 201

NOEC: 100 mg/l

Exposure time: 72 h

Species: Pseudokirchneriella subcapitata (green algae)

Test Type: Growth inhibition

Method: OECD Test Guideline 201

Toxicity to bacteria

: EC50: > 1,000 mg/l

Exposure time: 0.5 h

Species: activated sludge

Test Type: Respiration inhibition

Method: Domestic OECD Guideline 209

#### Elimination information (persistence and degradability)

Bioaccumulation : Bioconcentration factor (BCF): 381.4  
Does not bioaccumulate.

Biodegradability

: Result: Readily biodegradable.

Method: Closed Bottle test

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### 13. DISPOSAL CONSIDERATIONS

Product

: Do not dispose of waste into sewer.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste

Dispose of contents/container in accordance with local regulation.

Contaminated packaging

: Empty remaining contents.

Dispose of as unused product.

Do not burn, or use a cutting torch on, the empty drum.

Due to the high risk of contamination recycling/recovery is not recommended.

Follow all warnings even after the container is emptied.

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### 14. TRANSPORT INFORMATION

#### International Regulation

##### IATA-DGR

UN/ID No.

: UN 3116

Class

: 5.2

Not permitted for transport

##### IMDG-Code

UN number

: UN 3116

Proper shipping name

: ORGANIC PEROXIDE TYPE D, SOLID, TEMPERATURE CONTROLLED  
(Dimyristyl peroxydicarbonate)

Class

: 5.2

Packing group

: Not Assigned

Labels

: 5.2

EmS Code

: F-F, S-R

Marine pollutant : no

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Further information for transport**

Control temperature : 20 °C (68 °F)

Emergency temperature : 25 °C (77 °F)

**Domestic regulation**

**49 CFR**

UN/ID/NA number : UN 3116  
 Proper shipping name : Organic peroxide type D, solid, temperature controlled  
 : (Dimyristyl peroxydicarbonate, >96%)  
 Class : 5.2  
 Packing group : II  
 Labels : 5.2  
 ERG Code : 148  
 Marine pollutant : no  
 Reportable Quantity : This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.

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**15. REGULATORY INFORMATION**

**Notification status**

CH INV : YES. On the inventory, or in compliance with the inventory  
 TSCA : YES. All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.  
 DSL : YES. All components of this product are on the Canadian DSL.  
 AICS : YES. On the inventory, or in compliance with the inventory  
 NZIoC : NO. Not in compliance with the inventory  
 ENCS : YES. On the inventory, or in compliance with the inventory  
 ISHL : YES. On the inventory, or in compliance with the inventory  
 KECI : NO. Not in compliance with the inventory  
 PICCS : YES. On the inventory, or in compliance with the inventory  
 IECSC : NO. Not in compliance with the inventory

For explanation of abbreviations, see section 16.

TSCA list : Not relevant

OSHA Hazards : Combustible dust, Organic Peroxide, Skin sensitizer

**EPCRA - Emergency Planning and Community Right-to-Know**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Reactivity Hazard  
 Acute Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals subject to disclosure and listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

#### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

#### US State Regulations

##### Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

##### Pennsylvania Right To Know

|                              |            |            |
|------------------------------|------------|------------|
| Dimyristyl peroxydicarbonate | 53220-22-7 | 90 - 100 % |
|------------------------------|------------|------------|

##### New Jersey Right To Know

|                              |            |            |
|------------------------------|------------|------------|
| Dimyristyl peroxydicarbonate | 53220-22-7 | 90 - 100 % |
|------------------------------|------------|------------|

##### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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## 16. OTHER INFORMATION

#### Full text of H-Statements

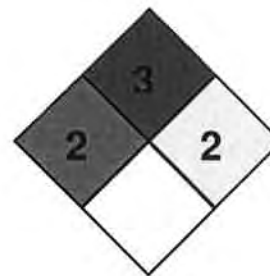
H242 : Heating may cause a fire.  
H317 : May cause an allergic skin reaction.

#### Further information

**HMIS Classification** : Health Hazard: 1  
Flammability: 3  
Physical hazards: 3

**NFPA Classification**

: Health Hazard: 2  
Fire Hazard: 3  
Reactivity Hazard: 2

**Notification status explanation**

|        |  |
|--------|--|
| REACH  | 1907/2006 (EU)   |
| CH INV | Switzerland. New notified substances and declared preparations     |
| TSCA   | United States TSCA Inventory                                       |
| DSL    | Canadian Domestic Substances List (DSL)                            |
| AICS   | Australia Inventory of Chemical Substances (AICS)                  |
| NZIoC  | New Zealand. Inventory of Chemical Substances                      |
| ENCS   | Japan. ENCS - Existing and New Chemical Substances Inventory       |
| ISHL   | Japan. ISHL - Inventory of Chemical Substances                     |
| KECI   | Korea. Korean Existing Chemicals Inventory (KECI)                  |
| PICCS  | Philippines Inventory of Chemicals and Chemical Substances (PICCS) |
| IECSC  | China. Inventory of Existing Chemical Substances in China (IECSC)  |

**Further information**

Revision Date 04/26/2015

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. The user must determine the appropriate measures that need to be implemented for the use and handling of this product in the context of the user's operations and use of this product. 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. No warranty is made as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. User must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. Nothing contained herein shall be construed as granting or extending any license under any patent.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

