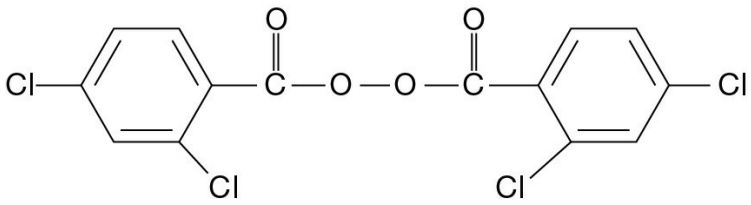
Perkadox PD-50S-PS

Di(2,4-dichlorobenzoyl) peroxide



Diacyl peroxide, 50% active ingredient in silicone oil and silica, in paste form for ease of dispersion. The most common organic peroxide used in silicone rubber, particularly injection-molded rubber articles.

CAS number
133-14-2

EINECS/ELINCS No.
205-094-9

TSCA status
listed on inventory

Molecular weight
380.0

Active oxygen content peroxide
4.21%

Concentration
2.06-2.15%

Specifications

Appearance	Off-white homogeneous paste
Assay	49.0-51.0 %
Inorganic + organic hydrolysable chloride	≤ 500 mg/kg
Particle size	≤ 50 µm
Water	≤ 1.5 %

Characteristics

Density, 20°C	1.18 g/cm^3

Applications

Perkadox PD-50S-ps is mainly used for the crosslinking of silicone rubbers. With Perkadox PD-50S-ps silicone rubber compounds can be cured without external pressure (hot air and/or IR vulcanization).

Thermal stability

Organic peroxides are thermally unstable substances, which may undergo self-accelerating decomposition. The lowest temperature at which self-accelerating decomposition of a substance in the original packaging may occur is the Self-Accelerating Decomposition Temperature (SADT). The SADT is determined on the basis of the Heat Accumulation Storage Test.

SADT	60°C (140°F)
Method	The Heat Accumulation Storage Test is a recognized test method for the determination of the SADT of organic peroxides (see Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria - United Nations, New York and Geneva).

Storage

Due to the relatively unstable nature of organic peroxides a loss of quality can be detected over a period of time. To minimize the loss of quality, Nouryon recommends a maximum storage temperature (Ts max.) for each organic peroxide product.

Ts Max.	30°C (86°F)
Note	When stored under these recommended storage conditions, Perkadox PD-50S-ps will remain within the Nouryon specifications for a period of at least six months after delivery.

Packaging and transport

The standard package is a plastic pail with 20 kg net weight. Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your Nouryon representative. Perkadox PD-50S-ps is classified as Organic peroxide type D; solid, Division 5. 2; UN 3106.

Safety and handling

This product contains a component that is classified as Toxic for Reproduction, Category 1B under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Nouryon ensures that it consistently manages hazardous substances to ensure safe use. To that end, a full risk assessment of this product has been conducted under Nouryon's Priority Substance Program and safe use has been demonstrated throughout the supply chain. Please refer to the Material Safety Data Sheet (MSDS) and extended SDS (eSDS) for further information on the safe storage, use and handling of Perkadox PD-50S-ps. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available at https://polymerchemistry.nouryon.com and eSDS can be made available on request. Keep containers tightly closed. Store and handle Perkadox PD-50S-ps in a dry well-ventilated place away from sources of heat or ignition and direct sunlight. Never weigh out in the storage room. Avoid contact with reducing agents (e. g. amines), acids, alkalines and heavy metal compounds (e. g. accelerators, driers and metal soaps).

Major decomposition products

Carbon dioxide, 1,3-Dichlorobenzene, 2,4-Dichlorobenzoic acid, Traces of 2,2’,4,4’ tetrachlorobiphenyl

Contact Us

Europe, Middle East, India and Africa
polymerchemistry.nl@nouryon.com

Asia Pacific
polymerchemistry.ap@nouryon.com

Americas
polymerchemistry.na@nouryon.com

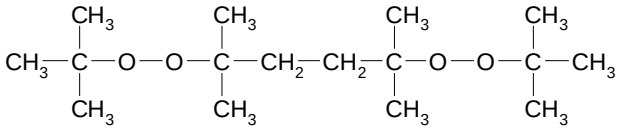
Nouryon

Product Data Sheet

Trigonox® 101

Product description

2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane



Molecular weight	: 290.4
Active oxygen content peroxide	: 11.02%
CAS No.	: 78-63-7
EINECS/ELINCS No.	: 201-128-1
TSCA status	: listed on inventory

Trigonox 101 is a bifunctional peroxide which is used for the crosslinking of natural and synthetic rubbers, as well as thermoplastic polyolefins.

Specifications

Appearance	: Clear liquid
Color	: 50 Pt-Co max.
Assay	: 92.0% min.
Active Oxygen	: 10.14% min.
Hydroperoxides	: 0.3% max.

Characteristics

Density, 20°C	: 0.870 g/cm^3
Flashpoint	: >65°C (>149°F)
Freezing point	: 6°C (43°F)

Storage

Due to the relatively unstable nature of organic peroxides a loss of quality can be detected over a period of time. To minimize the loss of quality, AkzoNobel recommends a maximum storage temperature (T_s max.) for each organic peroxide product.

For *Trigonox* 101	T_s max. = 40°C (104°F)
	T_s min. = 10°C (50°F)

When stored under these recommended storage conditions, *Trigonox* 101 will remain within the AkzoNobel specifications for a period of at least six months after delivery.

Thermal stability

Organic peroxides are thermally unstable substances, which may undergo self-accelerating decomposition. The lowest temperature at which self-accelerating decomposition of a substance in the original packaging may occur is the Self-Accelerating Decomposition Temperature (SADT). The SADT is determined on the basis of the Heat Accumulation Storage Test.

For *Trigonox* 101 SADT : 80°C (176°F)

The Heat Accumulation Storage Test is a recognized test method for the determination of the SADT of organic peroxides (see Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria - United Nations, New York and Geneva).

Major decomposition products

Methane, Ethane, Acetone, tert-Butanol, tert-Amylalcohol

Packaging and transport

The standard packaging is a 30 l HDPE can (Nourytainer[â]) for 25 kg peroxide formulation.

Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your AkzoNobel representative.

Trigonox 101 is classified as Organic peroxide type C; liquid, Division 5.2; UN 3103.

Safety and handling

Keep containers tightly closed. Store and handle *Trigonox* 101 in a dry well-ventilated place away from sources of heat or ignition and direct sunlight. Never weigh out in the storage room.

Avoid contact with reducing agents (e.g. amines), acids, alkalis and heavy metal compounds (e.g. accelerators, driers and metal soaps).

Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of *Trigonox* 101. This information should be thoroughly reviewed prior to acceptance of this product.
The MSDS is available at www.akzonobel.com/polymer.

Applications

Trigonox 101 is used for the crosslinking of natural and synthetic rubbers, as well as thermoplastic polyolefins.

- Rubber compounds containing Trigonox 101 have excellent scorch safety.
- Safe processing temperature: 135°C (rheometer t_{s2} > 20 minutes).
- Typical crosslinking temperature: 175°C (rheometer t_{90} about 12 minutes).

AkzoNobel Polymer Chemistry
Arnhem, The Netherlands
T +31 88 969 2727
E polymerchemistry.nl@akzonobel.com

AkzoNobel Polymer Chemistry
Chicago, U.S.A.
T +1 312 544 7000
T +1 800 828 7929 (Toll free US only)
F +1 312 544 7188
E polymerchemistry.na@akzonobel.com

Akzo Nobel (Asia) Co., Ltd.
Shanghai, PR China
T +86 21 2220 5000
F +86 21 2220 5558
E polymerchemistry.ap@akzonobel.com

www.akzonobel.com/polymer

BLUESIL EMUL E1P

Description

BLUESIL EMUL E1P is an oil in water emulsion containing 35 % of a silicone oil. It can be used in many industries.

Examples of applications

- Mould release of technical rubber, tyres, plastics as well as foundry materials.
- Lubricant for web-offset printing.
- Silky sheen for furs.
- Softener in textile finish formulations.
- Water-repellent and anti-adherent for industrial glassware.
- Constituent of maintenance product and polishes: floors, furniture, leather, lubricating, anti-mottling and brightening agent in the printing industry.

Key benefits

- High resistance to heat: no thermal degradation which might leave carbonaceous residues.
- High chemical inertness.
- High water-repellent properties (glass industry).
- Complete incompatibility with some organic materials.
- Good lubricating properties.
- Good softening effect (textile industry).

Typical properties

Appearance	milky liquid
Viscosity of the base fluid at , mm2/s, approx	300
Specific gravity at 25 °C, approx	1.0
pH, approx	6 to 8
Solvent	none
Dry content, %, approx .	40
Silicone content, %, approx	35

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

Instruction of use

1. As a release agent, **BLUESIL EMUL E1P** should be applied to clean surfaces in dilutions to 30-100 times its volume by spraying, padding, or brushing. It is applicable to hot surfaces (up to). Add the water in the emulsion (hardness of water < 250 ppm as CaCO3).
2. In the textile industry, **BLUESIL EMUL E1P** may be used as follows:
   - For softening effect as an additive to finish formulations.
   - As a lubricant, after addition to sizing formulae provided that it should be compatible with other constituents of the formula after treatment, drying occurs in the usual conditions, without polymerisation.
   - As a brightener for natural or synthetic furs. The treatment is made using spray or lick roll techniques, and drying occurs in the usual conditions: a glossy appearance is thus obtained. **BLUESIL EMUL E1P** gives no water repellency to the substrates.

The quantity of **BLUESIL EMUL E1P** used will depend upon the desired effect and properties.

Regulation

Please consult your local ELKEM SILICONES sales office.

Limitations

Please consult your local ELKEM SILICONES sales office.

Packaging

- BLUESIL EMUL E1P is available in
  - Pallet of 1000 KG (2205 LB)
  - Drum of 200 KG (441 LB)
  - Pail of 25 KG (55.13 LB)
  - Drum of 25 KG (55.13 LB)

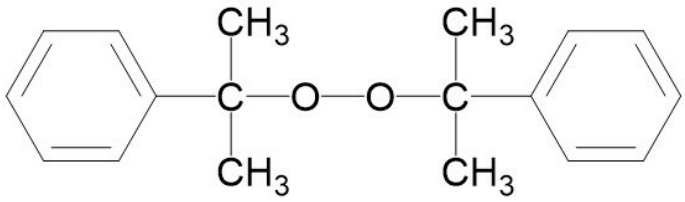
BLUESIL EMUL E1P

Storage and shelf life	When stored in its original packaging: BLUESIL EMUL E1P may be stored at temperatures between 2°C / 36°F and 30°C / 86°F for up to 12 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
Safety	Please consult the Safety Data Sheet of: BLUESIL EMUL E1P

Visit our website www.elkem.com/silicones/

Perkadox BC-FF

Dicumyl peroxide



Perkadox® BC-FF is a monofunctional peroxide which is used for the crosslinking of natural rubber and synthetic rubbers, as well as polyolefins. Rubber compounds containing Perkadox® BC-FF have excellent scorch safety, and under certain conditions one step mixing is possible. Safe processing temperature: 130°C (rheometer ts2 > 20 min.). Typical crosslinking temperature: 170°C (rheometer t90 about 12 min.).

CAS number 80-43-3	EINECS/ELINCS No. 201-279-3
TSCA status listed on inventory	Molecular weight 270.4
Active oxygen content peroxide 5.92%	Concentration 5.86% min.

Specifications

Appearance	White crystals
Assay	≥ 99.0 %

Applications

Perkadox® BC-FF can be used for the market segments: polymer production and polymer crosslinking with their different applications/functions. For more information please check our website and/or contact us.

Half-life data

The reactivity of an organic peroxide is usually given by its half-life (t1/2) at various temperatures. For Perkadox® BC-FF in chlorobenzene half-life at other temperatures can be calculated by using the equations and constants mentioned below:

0.1 hr	at 154°C (309°F)
1 hr	at 132°C (270°F)
10 hr	at 112°C (234°F)
Formula 1	kd = A·e-Ea/RT
Formula 2	t½ = (ln2)/kd
Ea	152.67 kJ/mole
A	9.24E+15 s-1
R	8.3142 J/mole·K
T	(273.15+°C) K

Thermal stability

Organic peroxides are thermally unstable substances, which may undergo self-accelerating decomposition. The lowest temperature at which self-accelerating decomposition of a substance in the original packaging may occur is the Self-Accelerating Decomposition Temperature (SADT). The SADT is determined on the basis of the Heat Accumulation Storage Test.

SADT	75°C (167°F)
Method	The Heat Accumulation Storage Test is a recognized test method for the determination of the SADT of organic peroxides (see Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria - United Nations, New York and Geneva).

Storage

Due to the relatively unstable nature of organic peroxides a loss of quality can be detected over a period of time. To minimize the loss of quality, Nouryon recommends a maximum storage temperature (Ts max.) for each organic peroxide product.

Ts max.	30°C (86°F)
Note	When stored under the recommended storage conditions, Perkadox® BC-FF will remain within the Nouryon specifications for a period of at least 12 months after delivery.

Packaging and transport

In North America Perkadox® BC-FF is packed in non-returnable cartons containing 55. 1 lb net weight. In other regions the standard packaging is a non-returnable carton containing 5 x 5 kg peroxide. Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your Nouryon representative. Perkadox® BC-FF is classified as Organic peroxide type F; solid, Division 5. 2; UN 3110.

Safety and handling

Keep containers tightly closed. Store and handle Perkadox® BC-FF in a dry well-ventilated place away from sources of heat or ignition and direct sunlight. Never weigh out in the storage room. Avoid contact with reducing agents (e. g. amines), acids, alkalis and heavy metal compounds (e. g. accelerators, driers and metal soaps). Please refer to the Safety Data Sheet (SDS) for further information on the safe storage, use and handling of Perkadox® BC-FF. This information should be thoroughly reviewed prior to acceptance of this product. The SDS is available at nouryon.com/sds-search.

Major decomposition products

Methane, Acetophenone, 2-Phenylisopropanol

Contact Us

Polymer Specialties Americas
polymer.amer@nouryon.com

Polymer Specialties Europe, Middle East, India and Africa
polymer.emeia@nouryon.com

Polymer Specialties Asia Pacific
polymer.apac@nouryon.com