

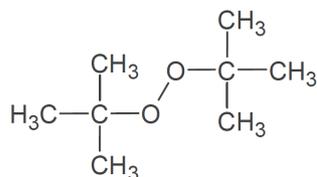
# PEROXAN DB

## Dialkyl peroxide / Polymerization

### Description

Di-tert-butyl peroxide  
98%, Liquid

PEROXAN DB is used for the (co)polymerization of ethylene, styrene, acrylates and methacrylates. PEROXAN DB is also used for the production of controlled rheology polypropylene (CR-PP).



Molecular weight: **146.2**  
CAS No.: **110-05-4**

### Technical data

Appearance: **clear liquid**  
Peroxide assay: **min. 98%**  
Active oxygen assay: **min. 10.72%**  
Density at 20°C: **0.8 g/cm<sup>3</sup>**

### Half life time

in chlorobenzene:

t <sub>1/2</sub>	10h	1h	1min
bei	<b>121°C</b>	<b>141°C</b>	<b>183°C</b>

### Solubility

not determined

### Storage

Maximum storage temperature (Ts max): **40°C**  
Storage stability as from date of delivery: **6 months**

### Hazardous reactions

Keep packaging tightly closed in a well ventilated place at indicated storage temperature. Keep away from reducing agents e.g. amines, acids, alkalis, heavy metal compounds (e.g. accelerators, driers, metal soaps). Never weigh out in storage room.

Oxidizing agent. Decomposes violently under the influence of heat or by contact with reducing agent. Never mix with accelerators.

Organic Peroxides are more or less stable products but will decompose under the influence of heat. To minimize a loss of quality during storage, it is important that the recommended maximum storage temperature is not exceeded. If a minimum storage temperature is given, an undesirable process such as a solidification or phase separation, is known to occur below this temperature.

### Safety characteristics

Flash point:  
SADT: **80°C**

The SADT (Self Accelerating Decomposition Temperature) is the lowest temperature at which a self accelerating decomposition may occur.

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### Application

Due to its high volatility, PEROXAN DB requires precautions in handling and metering.

Polymerization of ethylene:

PEROXAN DB is used for high pressure polymerization of ethylene in both autoclave and tubular processes, usually in combination with other peroxides of varying degrees of activity.

Temperature range: 240 to 280°C

Light-off temperature at 2300 bar: 265°C

Polymerization of styrene:

PEROXAN DB may be used in polymerization and copolymerization of styrene. In a mass process PEROXAN DB can be used to increase polymerization rates.

Temperature range: 95 to 185°C

Dosing: 0,02 to 0,1 phr

Polymerization of acrylates and methacrylates:

PEROXAN DB can be used as initiator for the solution, bulk and suspension (co)polymerization of acrylates and methacrylates.

Temperature range (solution polym.): 130 to 175°C

Dosing: 0,05 to 0,1 phr

Controlled rheology polypropylene (CR-PP) in an extrusion process:

PEROXAN DB allows great flexibility in controlling the melt flow index (MFI) of polypropylene. Small changes in either peroxide concentration or process temperature can produce significantly different MFIs. The MFI increases with the peroxide level.

Temperature range: 200 to 220°C

Dosing: 0,01 to 0,1 phr

### Packaging

**20kg container**

**154kg drum**

### Major decomposition products

**Acetone, Methane, tert-Butanol**

### Safety and handling

Please refer to the material safety data sheet (MSDS) for information concerning safe storage, use and handling of PEROXAN DB. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available for downloading at [www.pergan.com](http://www.pergan.com) or through contacting Pergan directly.

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