

DHBP

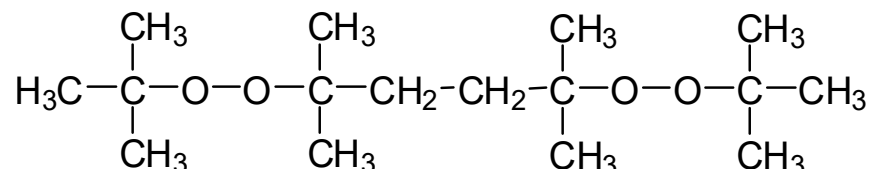
2,5-Dimethyl-2,5-di (tert .butylperoxy) hexane

CAS#78-63-7

Liquid, techn. pure

Molar mass: 290.4 g/mol

Structural Formula



Description

Colourless, mobile liquid, consisting of technically pure 2,5-Dimethyl 2,5-di(tert .butyl peroxy) hexane. This bifunctional dialkyl peroxide is used as an initiator (radical source) in the crosslinking of polymers, and the rheology control of polypropylene.

Technical Data

| | |
|--|---|
| Appearance | colourless liquid |
| Purity (GC) | approx. 94% w/w |
| Active oxygen (calculated) | approx. 10.4% w/w |
| De-sensitising agent | none |
| Density at 20 °C | approx. 0.87 g/cm ³ |
| Viscosity at 20 °C | approx. 7 mPa.s |
| Refractive index at 20 °C | approx. 1.422 |
| Colour index (Hazen) | approx. 50-80 |
| Miscibility | not miscible with water, miscible with alcohols, esters |
| Vapour pressure at 50/80/110 °C | 8/27/95 mbar |
| Critical temperature (SADT) | approx. 90 °C |
| Cold storage stability | freezing point below 10 °C |
| Recommended storage temperature | 10 to 40 °C |
| Storage stability as from date of delivery | 12 months |

This product is in compliance with the ElektroG (E U-Directives: RoHS 2002/95/EG, WEEE 2002/96/EG)

Half-life-time

10 h/1 h/1 min (0.1 m/benzene): 120/142/190 °C

Application

CR-POLYPROPYLEN:

A radical source to control the rheology of polypropylene.

Temperature range: 200-220°C

Usage level: 0.01-0.1% w/w of product as supplied, based on polymer.

This degradation, e.g. in an extruder, lowers the molecular weight mean and permits easier (re)processing of the polypropylene. The melt-flow index of the controlled rheology material increases with the peroxide level. (Table 1)

Stabilizers, such as phenolic antioxidants and UV-additives can react as radical scavenger and reduce efficiency of the degradation process. (Table 2.)

Further information on organic peroxides for polymerisation can be found in our technical brochures on this subject.

„Vis-breaking“-Efficiency

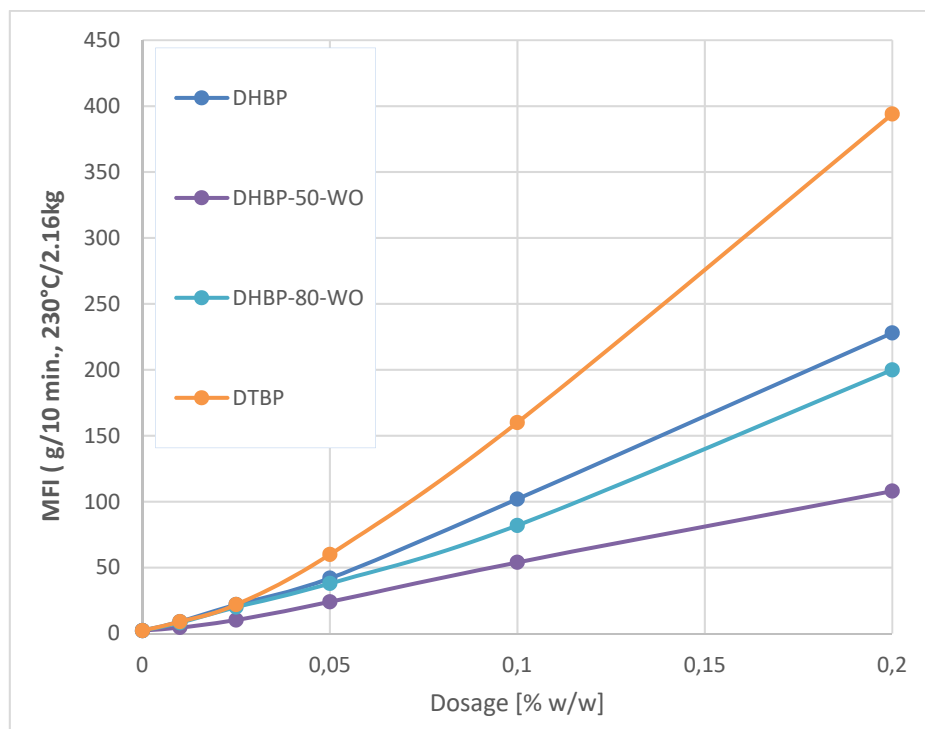


Table 1: Influence of Peroxide dosage

Degradation of an unstabilized standard Polypropylene homopolymer (MFI 2g/10min at 230°C/2.16kg) in a single screw extrusion line at 230°C (40 rpm)

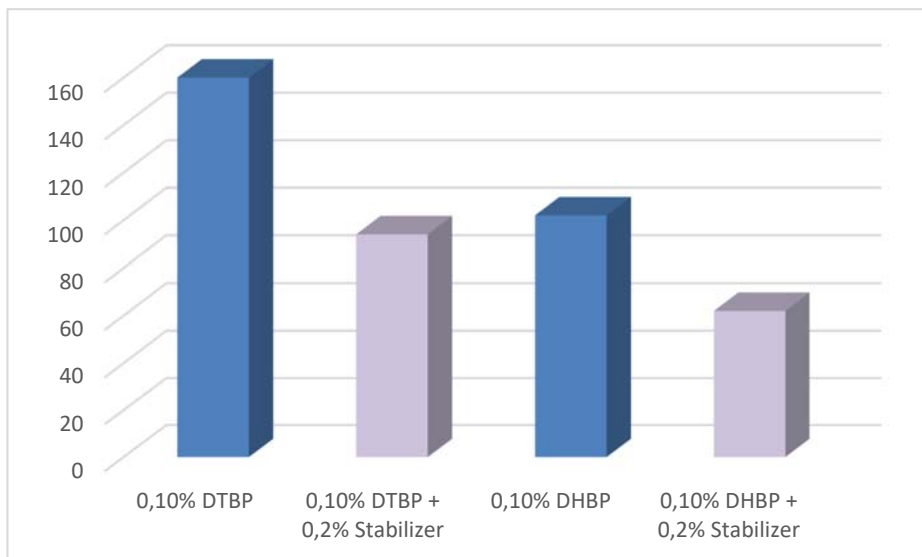


Table 2: Influence of stabilizer package (UV / Antioxidant – combination)
Polypropylene homopolymer (MFI 2g/10min at 230°C/2.16kg) Trials in a single screw extrusion line at 230°C (40 rpm)

Standard Packaging

25 kg in HDPE canister

Disclaimer

This information and all further technical advice are reflecting our present knowledge and experience based on internal tests with local raw materials with the purpose to inform about our products and applications. The information should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. We reserve the right to make any changes according to technological progress or further developments.

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