DTBP
Di(tert.-butyl)peroxide
CAS#110-05-4
Liquid, techn. pure
Molar mass: 146.2 g/mol

Structural Formula

\[
\begin{array}{c}
\text{CH}_3 \quad \text{CH}_3 \\
\text{H}_3\text{C} - \text{C} - \text{O} - \text{O} - \text{C} - \text{CH}_3 \\
\text{CH}_3 \quad \text{CH}_3
\end{array}
\]

Description
Colourless, mobile liquid, consisting of technically pure Di(tert.-butyl) peroxide. This highly volatile dialkyl peroxide is used as an initiator (radical source) in the polymerisation of monomers and crosslinking of polyethylene.

Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>colourless liquid</td>
</tr>
<tr>
<td>Purity (GC)</td>
<td>&gt; 99%</td>
</tr>
<tr>
<td>Active oxygen (calculated)</td>
<td>&gt; 10.8%</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>approx. 0.79 g/cm³</td>
</tr>
<tr>
<td>Viscosity at 20 °C</td>
<td>approx. 0.8 mPa.s</td>
</tr>
<tr>
<td>Refractive index at 20 °C</td>
<td>approx. 1.389</td>
</tr>
<tr>
<td>Miscibility</td>
<td>immiscible with water, miscible with organic solvents</td>
</tr>
<tr>
<td>Vapour pressure at 20/40/110 °C</td>
<td>25/75/1000 mbar</td>
</tr>
<tr>
<td>Critical temperature (SADT)</td>
<td>above 80 °C</td>
</tr>
<tr>
<td>Cold storage stability</td>
<td>liquid to below -25 °C</td>
</tr>
<tr>
<td>Recommended storage temperature</td>
<td>below 40 °C</td>
</tr>
<tr>
<td>Storage stability as from date of delivery</td>
<td>12 months</td>
</tr>
</tbody>
</table>

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): 125/146/190 °C

Application

ETHYLENE:
Initiator for high-pressure polymerisation in combination with other peroxides of varying degrees of activity.
Temperature range: 220-280 °C.
Particular advantage: liquid even at low temperatures and under high
pressure; high conversion rates.

(METH)ACRYLATES:
Initiator for the polymerisation of (meth)-acrylates, possibly in combination with more active peroxides, e.g. tert.Butylperoxy-2-ethylhexanoate. Temperature range: 120-180 °C.
Usage level: 0.05-0.1 % as supplied.

STYRENE: Initiator for the polymerisation of styrene in mass and solvent. Temperature range: 140 °C-180 °C. Usage level: 0.02-0.1% as supplied. Particular advantage: reduction of residual monomer content in this polymer, possibly in combination of more active peroxides or oxygen.

GRAFT POLYMERISATION:
Standard initiator for the styrenisation of alkyd resins. Temperature range: 140 °C-160 °C. Usage level: 0.5-2% as supplied. Styrene is grafted onto the unsaturated chain of alkyd resin inorder to approve the properties of the paint raw materials.

Standard Packaging

20kg in HDPE canister

Disclaimer
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