Technical Data Sheet

TBHP-70-AQ

tert. Butyl-hydroperoxide
CAS# 75-91-2
70%, aqueous solution
Molar mass: 90.1 g/mol

Structural Formula

\[ \text{CH}_3 \]

\[ \text{H}_3\text{C} \bigg\text{C} \bigg\text{O} \bigg\text{OH} \]

\[ \text{CH}_3 \]

Description

Colourless, mobile liquid, consisting of ca. 70% tert. butyl-hydroperoxide, desensitised with water. This alkyl-hydroperoxide is used as an initiator for the polymerisation of monomers, e.g. ethylene, vinylacetate or (meth-)acrylates.

Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>colourless, mobile liquid</td>
</tr>
<tr>
<td>Peroxide content</td>
<td>approx. 70 % w/w</td>
</tr>
<tr>
<td>Active oxygen (calculated)</td>
<td>approx. 12.5 % w/w</td>
</tr>
<tr>
<td>De-sensitising agent</td>
<td>water</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>approx. 0.93 g/cm³</td>
</tr>
<tr>
<td>Viscosity at 20 °C</td>
<td>approx. 4.1 mPa.s</td>
</tr>
<tr>
<td>Refractive index at 20 °C</td>
<td>approx. 1.387</td>
</tr>
<tr>
<td>Aqueous phase at 25 °C</td>
<td>max. 0.7 Vol%</td>
</tr>
<tr>
<td>Critical temperature (SADT)</td>
<td>&gt;80 °C</td>
</tr>
<tr>
<td>Cold storage stability</td>
<td>freezing point below 0 °C</td>
</tr>
<tr>
<td>Recommended storage temperature</td>
<td>2 to 35 °C</td>
</tr>
<tr>
<td>Storage stability (activity)</td>
<td>as from date 12 months</td>
</tr>
</tbody>
</table>

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

Half-life-time

10 h/1 h/1 min (0.1 m/benzene): 170/195/260 °C

Application

ETHYLENE:
Initiator for high-pressure polymerisation of ethylene in combination with more active peroxides or oxygen. Temperature range: 280-340°C. TBHP-70-AQ is liquid even under high pressure.
OTHERS:
Initiator for the emulsion polymerisation of vinylacetate, (meth-)acrylates and acrylic resin paint dispersions in combination with suitable reducing agents (Fe-salts, sulphites, dithionites, RONGALITE, ascorbic acid or sugar). Temperature range: 50-80°C. Dosage level: 0.1-0.5% as supplied. Particularly suitable for reduction of residual monomer.

COPOLYMERISATION:
Initiator for the copolymerisation of styrene/butadiene or acrylnitrile/butadiene/styrene in emulsion. In combination with redox-systems polymerisation temperatures are possible between 5 and 25°C. Dosage level: 0.1-0.3% as supplied.

Standard Packaging
25 kg in HDPE canister
190 kg drums (for supply ex Germany)

Disclaimer
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