TBPEH-30-AL

tert. Butyl-per-2-ethylhexanoate
CAS#3006-82-4
30%, solution in aliphatics
molar mass: 216.3 g/mol

Structural Formula

\[
\begin{align*}
\text{CH}_3 & \quad \text{O} \quad \text{C}_2\text{H}_5 \\
\text{H}_3\text{C} & \quad \text{O} \quad \text{O} \quad \text{CH} \quad \text{O} \quad \text{CH}_3 \\
\text{CH}_3 & \quad \text{O} \quad \text{O} \quad \text{CH} \quad \text{O} \quad \text{CH}_3
\end{align*}
\]

Description
Colourless, mobile liquid, consisting of app. 30% w/w tert. Butyl-per-2-ethyl hexanoate, desensitized with aliphatic hydrocarbons. This branched, aliphatic perester is used as an initiator (radical source) in the polymerisation of monomers (ethylene, methacrylates). The product is offered in IBC and bulk packaging.

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>Peroxide content</td>
<td>approx. 30% w/w</td>
</tr>
<tr>
<td>Active oxygen</td>
<td>approx. 2.22% w/w</td>
</tr>
<tr>
<td>De-sensitising agent</td>
<td>aliphatic</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. 1.8 mPa·s</td>
</tr>
<tr>
<td>Refractive index at 20 °C</td>
<td>approx. 1.425</td>
</tr>
<tr>
<td>Critical temperature (SADT)</td>
<td>50 °C/40 °C/30 °C</td>
</tr>
<tr>
<td>Cold storage stability</td>
<td>to below -25 °C</td>
</tr>
<tr>
<td>Recommended storage temperature</td>
<td>max. 10 °C</td>
</tr>
<tr>
<td>Maximum transport temperature</td>
<td>not specified/not specified/20 °C</td>
</tr>
<tr>
<td>Storage stability (activity)</td>
<td>as from date of delivery</td>
</tr>
</tbody>
</table>

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

Half-life Data
10h/1h/1min (0.1 m benzene): 74/92/130 °C
Application

ETHYLENE:
Initiator for the high pressure polymerisation of ethylene in combination with other peroxides of varying degrees of activity.
Temperature range: 160-210°C.
Particular advantages: highly efficient; liquid, readily miscible with high-boiling aliphatics,
Transport: approved to be transported in intermediate bulk container (IBC, 1-1.25m³) and temperature controlled bulk tank containers (BTC, 19m³).

OTHER MONOMERS:
Initiator for the polymerisation of (meth-)acrylates and allyl monomers, where necessary in combination with more stable peresters (tert. Butylperoxy benzoate or tert. Butylperoxy-3,5,5-trimethyl hexanoate).
Temperature range: 80-120°C.
Usage level: 0.3-3% as supplied.

Standard packaging

740kg plastics IBC
920kg stainless steel IBC
13to bulk container

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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