

# Technical Data Sheet (TDS)

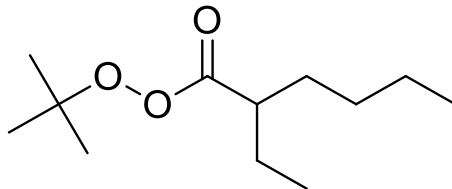
TBPEH  
Polymerisations (PO)



## TBPEH

*tert*-Butyl peroxy-2-ethylhexanoate  
CAS#3006-82-4  
colourless liquid

### Structural Formula



### Description

Colourless liquid, consisting of technically pure *tert*-butyl peroxy-2-ethylhexanoate. This branched, aliphatic perester is used as a radical initiator in the polymerisation of monomers (e.g. ethylene, (meth-)acrylates, etc.).

### Technical Data

Appearance	colourless liquid
Assay	ca. 99 % w/w
Active oxygen (AO)	ca. 7.32 % w/w
Density at 20 °C	ca. 0.90 g/cm <sup>3</sup>
Viscosity at 20 °C	ca. 4 mPa·s
Refractive index at 20 °C	ca. 1.428
Flash point	ca. 78 °C
Vapour pressure at 20 °C	ca. 0.02 mbar
Critical temperature (SADT)	ca. 35 °C
Cold storage stability	ca. -25 °C
Recommended storage temperature	max. 10 °C ●
Maximum transport temperature	20 °C
Storage stability as from date of delivery	3 months

### Standard Packaging

25 kg HDPE canister

### Half-life Data

10 h / 1 h / 1 min (benzene, 0.1 mol/L)    74 °C / 92 °C / 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 and therefore easy to dose, readily miscible with high boiling aliphatics

### STYRENE:

Initiator for the polymerisation of styrene in bulk or solution

Temperature range: 80 - 110 °C

Usage level: 0.08 - 0.4 %

**Particular advantage:** liquid and therefore easy to dose, Further reduction of residual monomer content in the polymer can be achieved by combination with thermally more stable peresters (e.g. TBPB or TBPIN)

### OTHER MONOMERS:

Initiator for the polymerisation of (meth-)acrylates and allyl monomers, useable in combination with more stable peresters (e.g. TBPB or TBPIN)

Temperature range: 80 - 120 °C

Usage level: 0.3 - 3 %

## Decomposition Products

Possible detectable decomposition products: *tert*-butyl alcohol; acetone, heptane

## Storage

Avoid any source of heat, light, humidity and protect the product from impurities. Keep within save temperature limits.

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