

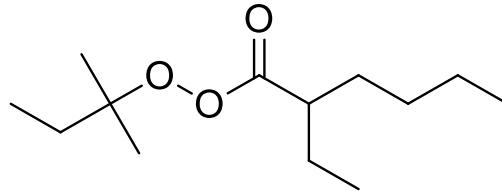
# Technical Data Sheet (TDS)

TAPEH  
Thermoset (TS)

## TAPEH

*tert*-Amyl peroxy-2-ethylhexanoate  
CAS#686-31-7  
Colourless liquid

### Structural Formula



### Description

Colourless, mobile liquid, consisting of technically pure *tert*-amyl peroxy-2-ethylhexanoate. This branched, aliphatic perester is used as a radical initiator in curing unsaturated polyester resins at 70 - 150 °C, possibly in combination with cobalt accelerators.

### Technical Data

Appearance	colourless liquid
Assay	ca. 98 % w/w
Active oxygen (AO)	ca. 6.81 % w/w
Density at 20 °C	ca. 0.9 g/cm <sup>3</sup>
Viscosity at 20 °C	ca. 4.3 mPa·s
Refractive index at 20 °C	ca. 1.433
Flash point	ca. 59 °C
Vapour pressure at 25 °C	< 0.1 mbar
Critical temperature (SADT)	ca. 35 °C
Cold storage stability	below -25 °C
Recommended storage temperature	below 10 °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)    72 °C / 91 °C / 130 °C

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## Application

### POLYESTER CURING:

Curing agent for UP resins, possibly in combination with cobalt accelerators.  
Temperature range: 70 - 150 °C

Dosage: 1 - 2 %, possibly together with 0.5 - 1 % accelerator Co-1

"Shelf life" (gel time of resin + peroxide) at ambient temperature several weeks, depending on resin type, filler, pigment.

"Pot life" (gel time of resin + peroxide + accelerator) up to several days, depending on temperature and peroxide level.

Shelf or pot life can be prolonged considerably by adding 0.1 - 0.3 % inhibitor BC-510.

### CURING CHARACTERISTICS:

In the range of 65 - 75 °C ("kick-off" temperature) the curing rate is not very high unless there is a reaction exotherm (e.g. within a heat-retaining mould). Short cure times of a few minutes can be achieved only in the optimum temperature range for wet press moulding at 110 - 130 °C.

TAPEH reacts faster compared to TBPEH (please refer the point measurements).

### PROCESSING METHODS:

In particular continuous impregnating (paper laminates), wet or hot press moulding, surface coating with wood varnishes, dripping electrical insulating varnishes with infrared heating.

## Decomposition Products

Possible detectable decomposition products: acetone, *tert*-amyl alcohol, ethyl *tert*-amyl ether

## Storage

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

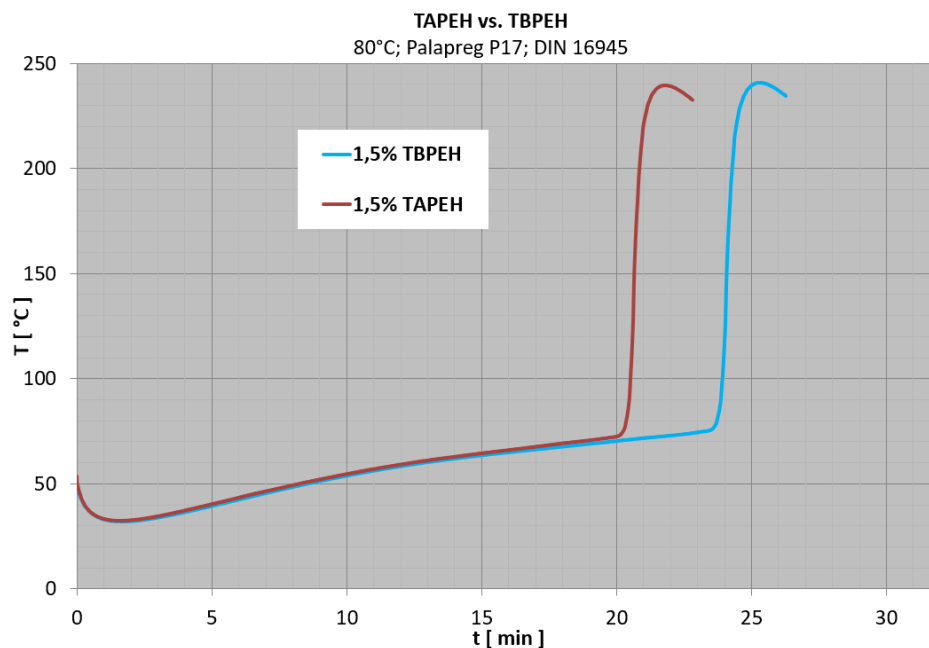
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## Measurements

### ACTIVITY:

TAPEH fulfils the requirements of faster curing performance in comparison to the widely used standard grade TBPEH.



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