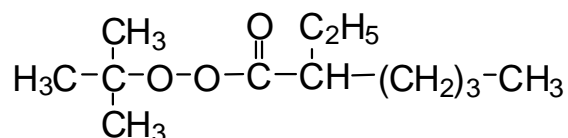


TBPEH-LA-M3

tert. Butylperoxy-2-ethylhexanoate
CAS#3006-82-4
Liquid mixture, low activity

Structural Formula



Description

Yellowish, mobile liquid, based on techn. pure tert. butyl-per-2-ethyl hexanoate. This branched, aliphatic perester is used as an initiator (radical source) in curing unsaturated polyester resins at 80-150°C.

Technical Data

Appearance	Yellowish liquid
Peroxide content	ca. 90 % w/w
Active oxygen	ca. 6.7 % w/w
De-sensitising agent	None
Density at 20°C	ca. 0.90 g/cm ³
Viscosity at 20°C	ca. 4.5 mPa*s
Refractive index at 20°C	ca. 1.438
Miscibility	immiscible with water miscible with alcohols, phthalate
Critical temperature (SADT)	ca. 40 °C
Cold storage stability	below -20 °C
Kick-off temperature	ca. 80 °C
Recommended storage temperature	max. 15 °C
Maximum transport temperature	20°C
Maintenance of activity as from date of delivery	3 months

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

Application

POLYESTER CURING:

Curing agent for UP resins. Temperature range: 80-150°C. Dosage: 1-2% as supplied. "Shelf life" (gel time of resin + peroxide) several weeks at ambient temperature, depending on resin type, filler, pigment.

CURING CHARACTERISTICS:

In the range of 70-80°C ("kick-off" temperature) the curing rate is not very high unless there is a reaction exotherm (e.g. within a heat-retaining mould). Really short cure times of a few minutes can be achieved only above 100°C. The optimum temperature range for wet press moulding is therefore 120-150°C.

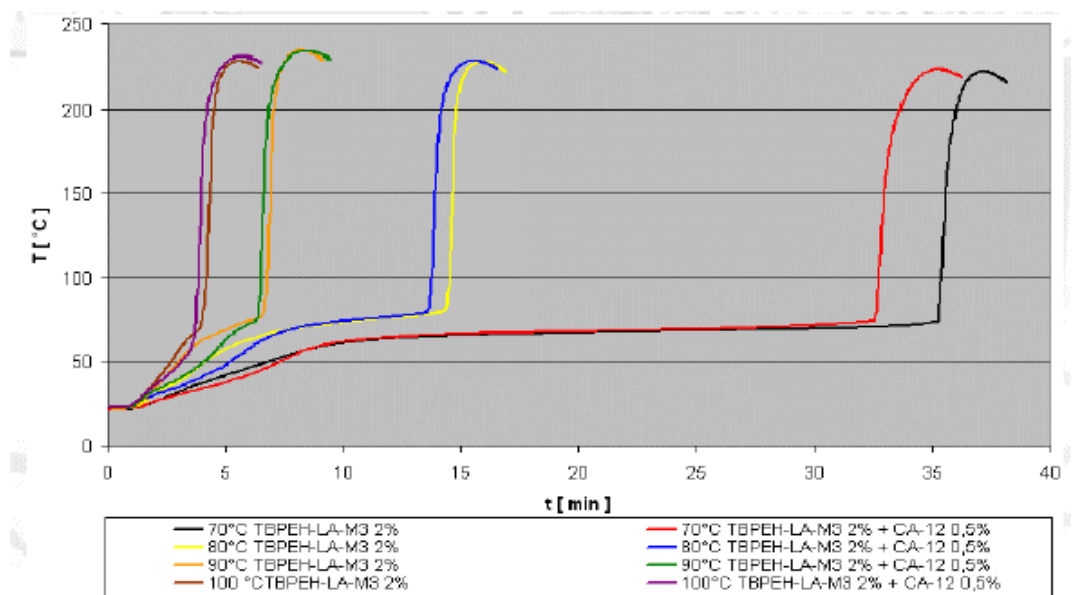
PROCESSING METHODS:

Mainly hot press moulding of sheet moulding compounds (SMC) or bulk moulding compounds (BMC).

Measurements

Reactivity for the curing of polyester resins at elevated temperatures:

Influence of temperature and accelerator on cure times (50g OPA resin in a test tube)										
Bath temperature	60°C		70°C		80°C		90°C		100°C	
Formulation (parts by weight)										
High reactive resin type (OPA)	100	100	100	100	100	100	100	100	100	100
TBPEH-LA-M3	2	2	2	2	2	2	2	2	2	2
Accelerator CA-12	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5
Curing data										
Gel time t_{gel} [min]	> 90	> 90	35.0	31.5	14.5	13.5	7.0	6.5	4.5	4.0
Cure time t_{max} [min]	-	-	37.0	34.0	16.0	15.5	8.5	8.0	6.0	5.5
Cure temperature T_{max} [°C]	-	-	224	222	233	236	236	239	232	234



Packaging

Standard packaging of TBPEH-LA-M3 is 25 kg.

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.

Application and usage of our products based on our technical advice is out of our control and sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming goods in order to verify the suitability for the intended application.

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