

CUROX[®] M-312

Methyl ethyl ketone peroxide

CAS#1338-23-4

Liquid mixture

Description

Colourless, mobile liquid, consisting of peroxides based on methyl ethyl ketone, essentially desensitised with aliphatic ester. This ketone peroxide is used as an initiator (radical source) in the curing of unsaturated polyester resins. Main application: curing of moulded parts at ambient temperature in combination with cobalt accelerators. Advantages: High efficiency with special pre-accelerated and stabilized resin types.

Technical data

Appearance	Colourless liquid
Active oxygen	Approx 8.6 – 9.1 % w/w
De-sensitising agent	Aliphatic ester
Density at 20°C	Approx. 1.01 g/cm ³
Viscosity at 20°C	Approx. 13 mPa.s
Miscibility	Immiscible with water, miscible with ester, alcohol
Critical temperature (SADT)	>60°C
Cold storage stability	Liquid to below -25°C
Recommended storage temperature	Below 30°C
Maintenance of activity at 30°C as from date of production	6 months

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

Application

POLYESTER CURING:

Curing agent for all UP resins at ambient temperature in combination with cobalt accelerators. Especially suitable for resins based on ortho- and isophthalic acid respectively. Standard dosage level: 1-3% as supplied, with 0.5-2% of a 1% cobalt solution. "Shelf life" (gel time of resin + peroxide) usually only a few hours, depending on temperature and resin type. "Pot life" (gel time of resin + peroxide + accelerator) relatively short, but maybe be prolonged by adding Inhibitor TC-510. Thus, the mould release factor ($fMR=tMR/tgel$) can be improved considerably.

CURING PERFORMANCE:

Moderate evolution of heat. Relatively long mould release time, moderate mould release factors. Temperatures below 20°C prolong curing times considerably, alternatively cobalt/ amine accelerators should then be used.

PROCESSING METHODS:

Particularly hand lay-up, spray lay-up, centrifugal casting, filament winding, casting of resins, and surface coatings (putties, fillers, gelcoats and topcoats).

SPRAY EQUIPMENT:

Use spray equipment in accordance with manufacturer's instructions. Ensure all safety devices are operational. Do not clear gun by spraying MEKP into the air.

Standard Packaging

The standard package size of Curox® M-312 are 5 kg and 30 kg polyethylene bottles.

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.

Measurements

Activity:

"Cobalt Curing" after DIN 16945 at 25°C with OPA resin (20g in a test tube)						
Formulation (parts by weight)						
Medium reactive resin type (OPA)	100	100	100	100	100	100
CUROX® M-312	2	2	2	2	1	1
Accelerator COB-1TX	2	1	0.5	0.2	1	0.5
Curing data						
Gel time t_{gel} [min]	3.5	4.5	8.5	26.0	13.5	24.0
Curing time t_{max} [min]	17.0	19.0	25.0	53.5	40.0	59.5
Peaktemperature T_{max} [°C]	139	141	137	115	109	93

