Technical Data Sheet

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CUROX®M-102

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 and vinyl ester resins. Main application: curing of large moulded parts at ambient temperature in combination with cobalt accelerators.

Technical Data

Appearance	Colourless liquid
Active oxygen	Approx 8.6 % 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, UP/VE-resins
Critical temperature (SADT)	Approx. 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 delivery	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 UP resins at ambient temperature in combination with cobalt accelerators. Suitable for all UP resin types and for vinyl ester resins. Standard dosage level: 1-3% as supplied, with 0.5-2% of a 1% cobalt solution (or alternatively cobalt amine accelerator). "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 long, especially, when ortho- or iso-phthalic resins are to be cured.

CURING PERFORMANCE:
Moderate evolution of heat, therefore low internal stress. Recommended for vinyl ester (VE) resins. Relatively short mould release times, i.e. good mould release factors (fMR = tMR/tgel). Temperatures below 20°C and/or some special resin types retard curing considerably. Action: with UP resins use more active grade (CUROX M-202, 302, 402); with VE resins, add amine accelerator.

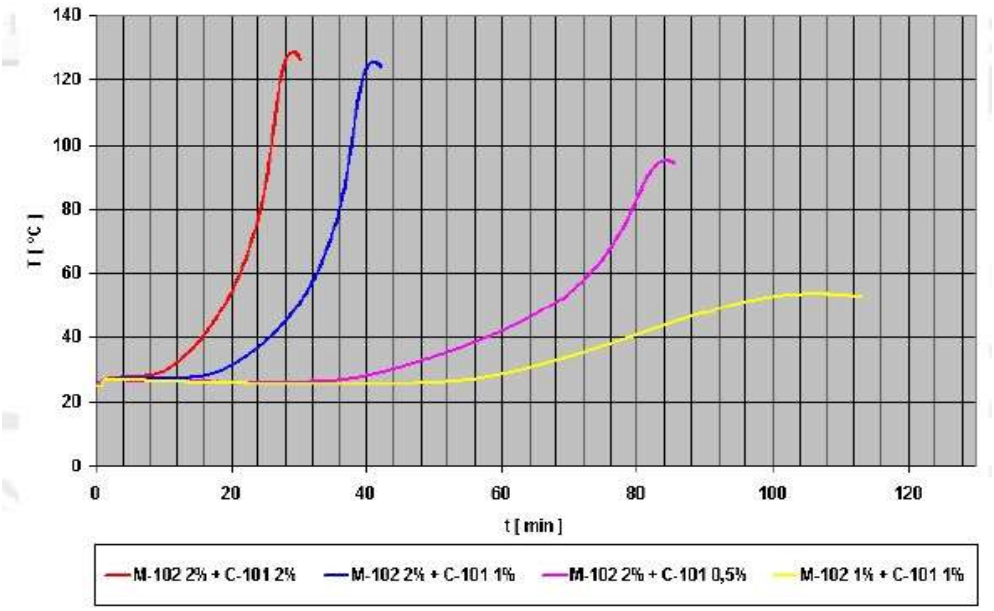
PROCESSING METHODS:
Particularly hand lay-up, spray lay-up, centrifugal casting, filament winding, casting of resins, and surface coatings (putties, fillers, gelcoats and topcoats).

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.

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-102	2	2	2	2	1	1
Accelerator C-101	2	1	0.5	0.2	1	0.5
Curing data						
Gel time t_{gel} [min]	10.0	18.5	43.0	>180	62.5	>180
Curing time t_{max} [min]	29.0	41.0	83.5	-	105	-
Peaktemperature T_{max} [°C]	130	125	96	-	54	-



Further information on suitable curing agents for unsaturated polyester resins is given in our application brochures on this subject

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Standard Packaging

The standard package size of CUROX®M-102 are 5 kg and 22,5 kg polyethylene bottles.

Disclaimer

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