

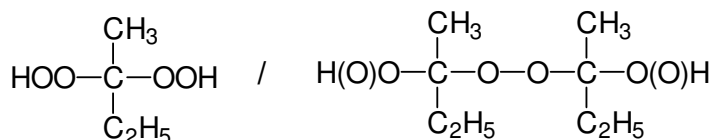
# Technical Data Sheet

## Polyester Curing

Ketone peroxides (Ambient temperature)

### CUROX<sup>®</sup> 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 ..... ca. 8.4-8.8% w/w  
De-sensitising agent ..... aliphatic ester  
Density at 20°C ..... ca. 1.01 g/cm<sup>3</sup>  
Viscosity at 20°C ..... ca. 13 mPa·s  
Miscibility ..... e.g. unsaturated polyester resins, alcohols, esters  
Critical temperature (SADT) ..... ca. 60°C  
Cold storage stability ..... liquid to below -25°C  
Recommended storage temperature ..... below 30°C  
Maintenance of activity at 25°C ..... min. 6 months

#### 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 ( $f_{MR} = t_{MR}/t_{gel}$ ). Temperatures below 20°C and/or some special resin types retard curing considerably. Action: with UP resins use more active grade (CUROX M-200, 300, 400); with VE resins, add amine accelerator.

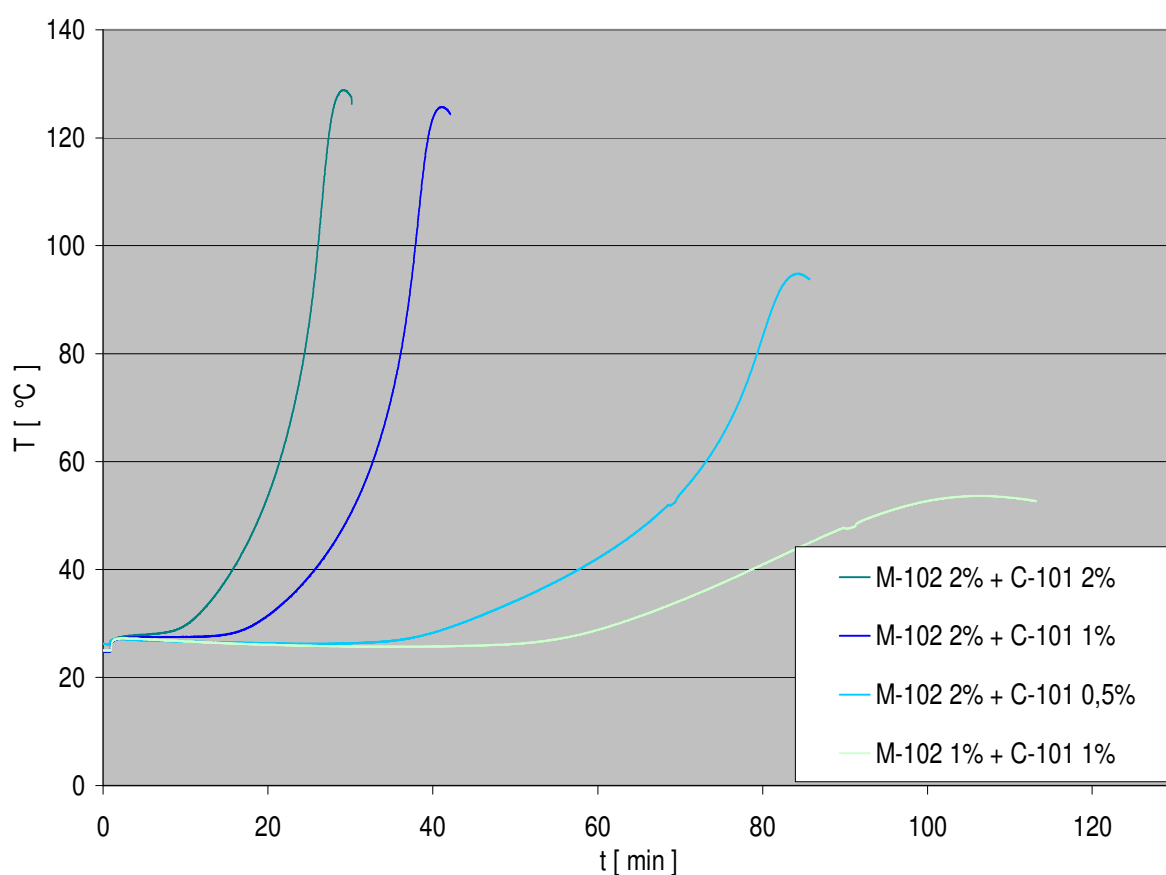
**PROCESSING METHODS:** Particularly hand lay-up, spray lay-up, centrifugal casting, filament winding, casting of resins, and surface coatings (putties, fillers, gelcoats and topcoats).

**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.

## Activity:

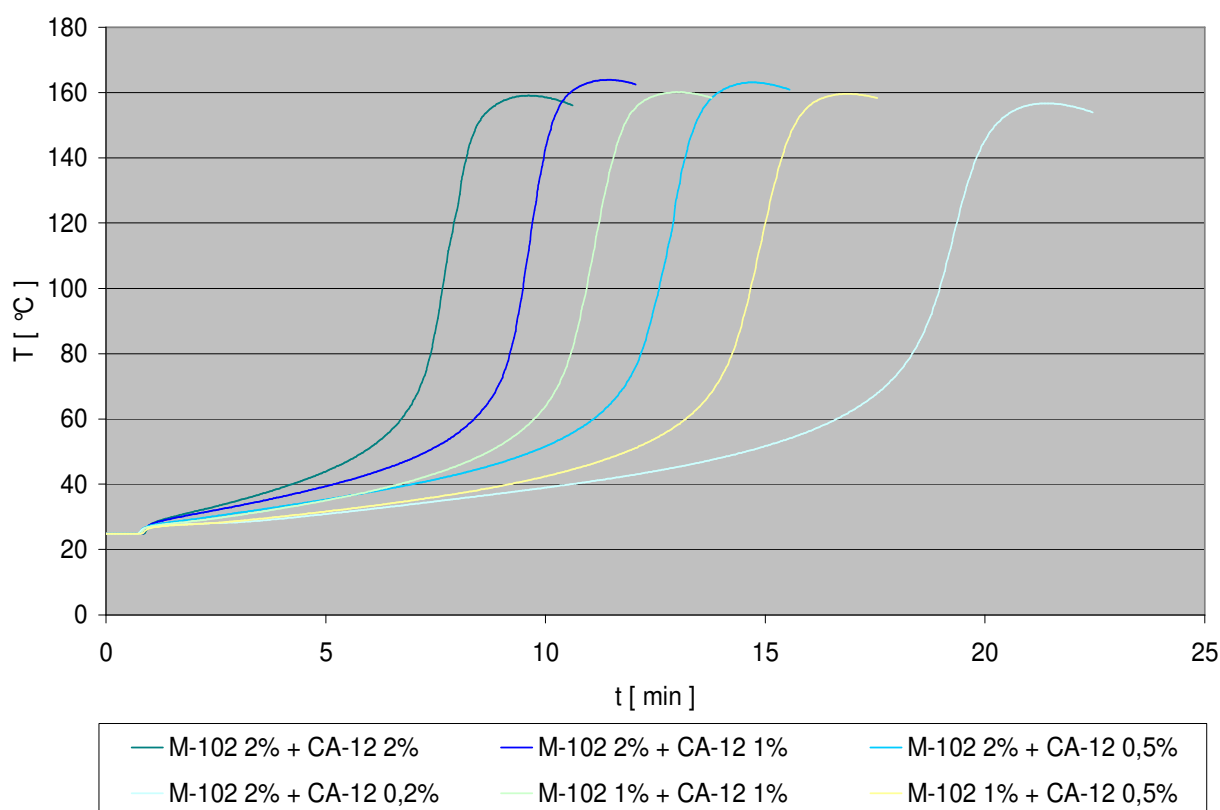
## Curing of o-phthalic acid resin

Curing: DIN 16945 (20 g in glas tubes, 25°C)						
Formulation (parts by weight)						
Medium reactive o-phthalic acid resin type	100	100	100	100	100	100
CUROX® M-102	2	2	2	2	1	1
Accelerator C-101 ( Cobaltoctoate )	2	1	0,5	0,2	1	0,5
Cure times (minutes)						
Gel time ( $t_{gel}$ )	10,0	18,5	43,0	>180	62,5	>180
Time to peak ( $t_{max}$ )	29,0	41,0	83,5		105	
Peak temperature (°C)	130	125	96		54	



## Curing of vinylester resin

Curing: DIN 16945 (20 g in glas tubes, 25 °C)						
Formulation (parts by weight)						
Medium reactive vinyl ester resin type	100	100	100	100	100	100
CUROX® M-102	2	2	2	2	1	1
Accelerator CA-12 ( Cobaltoctoate / Amine)	2	1	0,5	0,2	1	0,5
Cure times (minutes)						
Gel time ( $t_{gel}$ )	1,5	1,5	2,5	4,5	2,5	4,0
Time to peak ( $t_{max}$ )	9,5	11,5	14,5	21,5	13,0	16,5
Peak temperature (°C)	160	164	163	157	160	160



## Contact:

<http://www.united-initiators.com>

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