

Technical Data Sheet

Polyester Curing Ketone peroxides (Ambient temperature)

CUROX[®] M-105 (R)

Methyl ethyl ketone peroxide
CAS#1338-23-4
Liquid mixture

Description:

Colourless, mobile liquid, consisting of peroxides based on methylethylketone, essentially desensitised with phthalate plasticiser. This ketone peroxide is used as an initiator (radical source) in the curing of unsaturated polyester resins. Main application: gelcoats, curing of moulded, casted or winded glasfibre reinforced products at ambient temperature in combination with cobalt accelerators. Due to reduced Hydrogenperoxide content this product is suitable under increased ambient temperature in summer time or hot climate conditions.

The product is available on request as red coloured version to control homogenous mixing as well as indicating progress of curing reaction by discolouration

Technical Data:

Appearance	colourless liquid
Active oxygen	approx. 8,8% w/w
Free hydrogenperoxide content.....	approx. 1.5% w/w
Water content.....	approx. 0.5% w/w
De-sensitising agent.....	dimethylphthalate
Density at 20°C.....	approx. 1.12 g/cm ³
Viscosity at 20°C	approx. 20 mPa•s
Miscibility.....	miscible with alcohols, phthalates
Critical temperature (SADT).....	above. 60°C
Cold storage stability.....	below -20°C
Recommended storage temperature.....	0 to 30°C
Maintenance of activity at 25°	> 6 months

Application:

POLYESTER CURING: Curing agent for all UP resin types at ambient temperature in combination with cobalt accelerators. Standard dosage level: 1-3% as supplied, with 0.5-2% of a 1% cobalt solution.

Suitable also for gelcoats with improved osmosis resistance and lowest porosity due to low water- and hydrogenperoxide content.

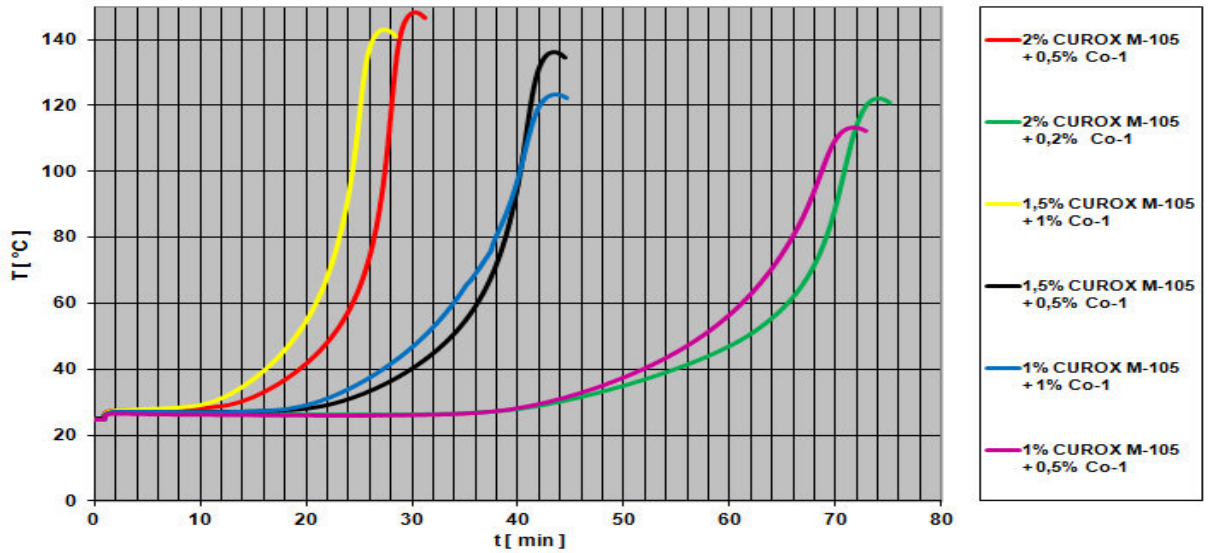
"Pot life" (gel time of resin + peroxide + accelerator) relatively short, but may be prolonged by adding Inhibitors, such as tert.butyl catechol.

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. Replacement of Curox M-303 in summertime or if climate conditions require a more moderate curing process to avoid negative effects like stress cracking, to short potlife...

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

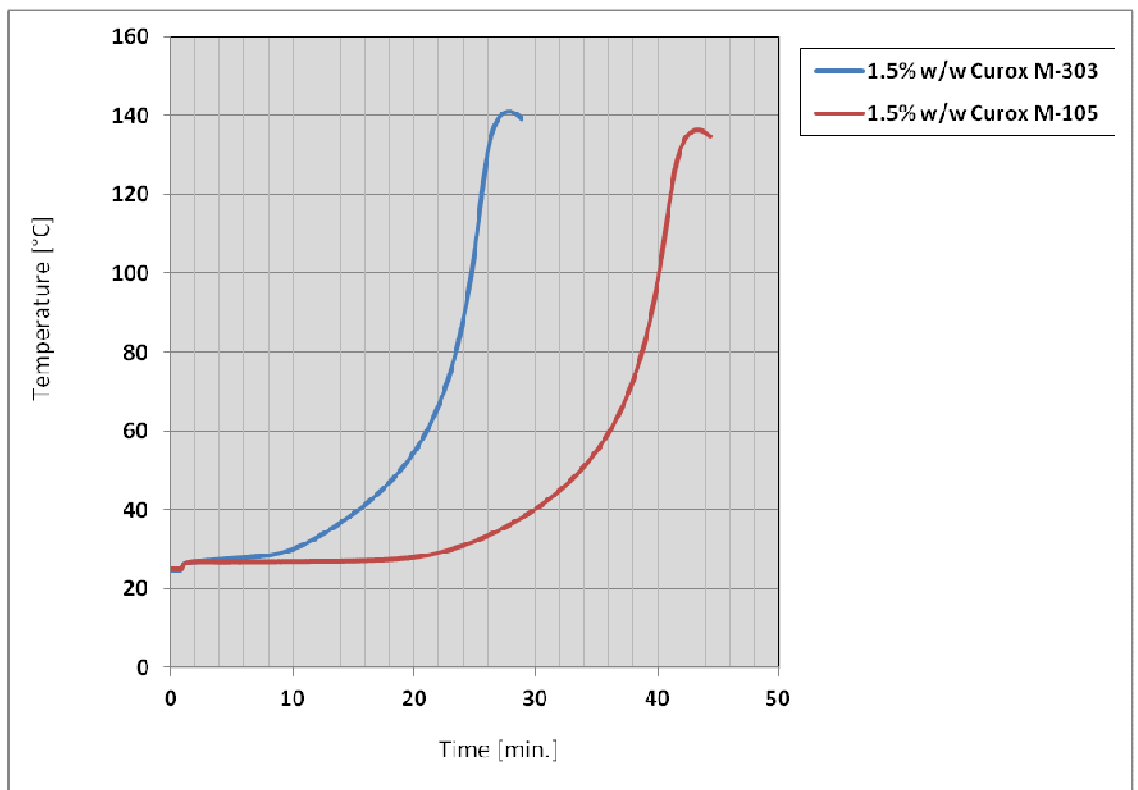
SPRAY EQUIPMENT: Use spray equipment in accordance with manufacturer's instructions. Ensure all safety devices are operational. Do not clear gun by spraying MEKP into the air.

Activity:



Measurements in compliance with DIN 16945 at 25°C with OPA resin (20g in a test tube)							
Medium reactive resin type (OPA)		100	100	100	100	100	100
CUROX® M-105	[Vol-%]	2.0	2.0	1.5	1.5	1.0	1.0
BÜFA® Accelerator Co 1	[Vol-%]	0.5	0.2	1.0	0.5	1.0	0.5
Curing data							
Gel time 25 -30°C t_{gel}	[min]	13.5	43.5	11.0	23.0	21.0	42.5
Gel time 25 -35°C t_{gel}	[min]	17.0	50.0	14.0	27.0	24.5	48.0
Curing time t_{max}	[min]	30.0	73.5	27.5	43.5	43.5	72.0
Peakttemperature T_{max}	[°C]	148	123	143	135	124	113

Comparison of Standard Curox M-303 verse summer version Curox M-105
Measurements in compliance with DIN 16945 at 25°C with OPA resin (20g in a test tube),
Co-octoate 0.5% (1% solution)



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

Disclaimer

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