

CUROX[®]CM-75

Methyl ethyl ketone peroxide;Cumene hydroperoxide
CAS#1338-23-4:80-15-9
Liquid mixture.

Description

Yellowish, mobile liquid, consisting of peroxides based on methylethylketoneperoxide and cumene hydroperoxide, essentially desensitised with phthalate plasticiser. This blend is used as an initiator (radical source) in the curing of unsaturated polyester resins, particularly also vinylester resins. Main application: vacuum infusion / plastic bag – technology; curing of hand/spray-layup reinforced parts at ambient temperature in combination with cobalt or cobalt/amine accelerators. Mainly used for thicker laminates.

Technical Data

Appearance	Yellowish liquid
Active oxygen	Approx 8.8 % w/w
Hydrogen peroxide content	Approx. 0.7 % w/w
Water content	Approx. 1.2 % w/w
De-sensitising agent	Dimethylphthalate
Density at 20 °C	Approx. 1.1 g/cm ³
Viscosity at 20 °C	Approx. 19 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 30 °C as from date of delivery	6 months

Application

POLYESTER CURING: Curing agent for all UP resin types, limited suitability for Vinylester resins at ambient temperature in combination with cobalt /cobalt-amine accelerators. Dosage level: 1-2.5% as supplied, with 0.5-2% of a 1% cobalt solution. Cobaltoctoate/Dimethylaniline-combinations can have a stronger acceleration effect in Vinylesterresins.

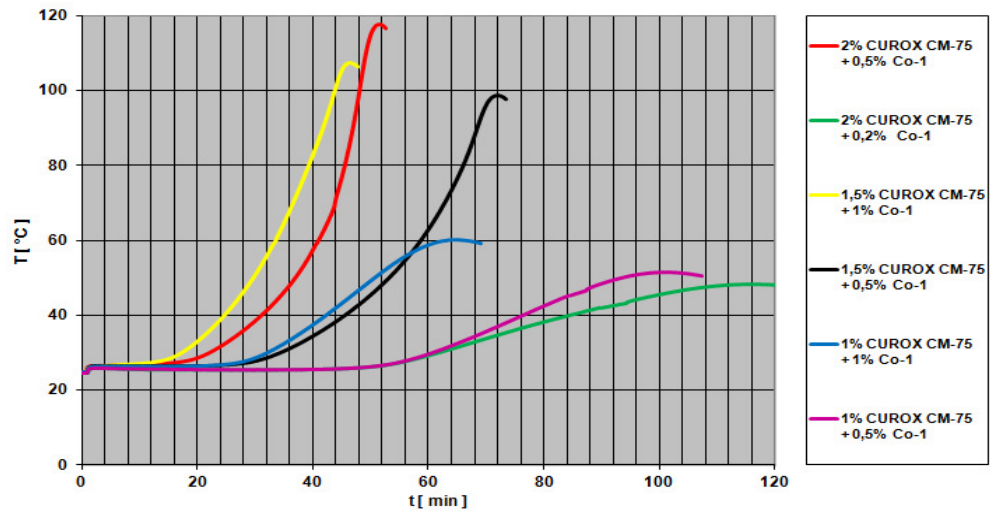
"Pot life" (gel time of resin + peroxide + accelerator) can sufficiently achieved for long time vacuum infusion/injection .

CURING PERFORMANCE: Depending on resin type very less evolution of heat as well as good curing rate through all dimensions (thin/thick layer) can be guaranteed . Geltime and gel to peaktime in unsaturated polyester resins much longer if compared to standard MEKP's (Curox M-303). Temperatures below 20 °C prolong curing times considerably, alternatively cobalt / amine accelerators should then be used.

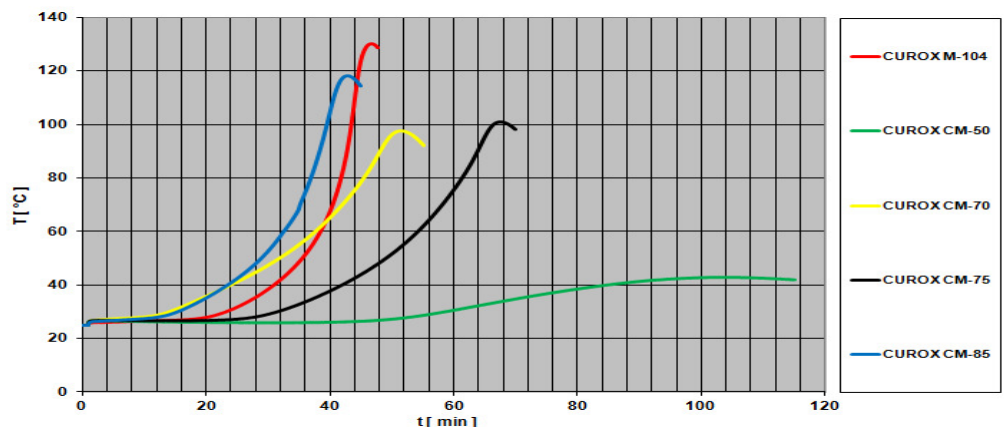
PROCESSING METHODS: hand lay-up, spray lay-up, filament winding, infusion process, particularly RTM

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

Activity:



Measurements in compliance with DIN 16945 at 25°C with Palatal P4 (20g in a test tube)							
Medium reactive resin type (OPA)		100	100	100	100	100	100
CUROX® CM-75	[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]	22.0	61.5	17.3	34.5	32.5	60.5
Gel time 25 -35°C t_{gel}	[min]	27.0	72.5	21.5	40.5	37.5	69.0
Curing time t_{max}	[min]	51.5	116.0	46.5	72.0	65.0	101.0
Peaktemperature T_{max}	[°C]	118	49	107	99	60	52



Measurements in compliance with DIN 16945 at 25 °C with Palatal P4 (20g in a test tube)						
Medium reactive resin type (OPA)		100	100	100	100	100
CUROX® M-104	[Vol-%]	1,5				
CUROX® CM-50	[Vol-%]		1,5			
CUROX® CM-70	[Vol-%]			1,5		
CUROX® CM-75	[Vol-%]				1,5	
CUROX® CM-85	[Vol-%]					1,5
BÜFA® Accelerator Co 1	[Vol-%]	0,5	0,5	0,5	0,5	0,5
Curing data						
Gel time 25 -30 °C t_{gel}	[min]	23.5	59.0	14.0	32.0	15.5
Gel time 25 -35 °C t_{gel}	[min]	27.5	71.0	27.5	37.5	20.0
Curing time t_{max}	[min]	47.0	104.0	51.5	68.0	43.0
Peakttemperature T_{max}	[°C]	130	43	98	101	118

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

Standard Packaging

The standard package size of Curox®CM-75 is 25 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.

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