

Technical Data Sheet (TDS)

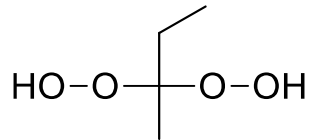
CUROX[®]M-303
Thermoset (TS)



CUROX[®]M-303

Methyl ethyl ketone peroxide
CAS#1338-23-4
Clear liquid

Structural Formula



Description

Colourless liquid, consisting of peroxides based on methyl ethyl ketone peroxide, essentially phlegmatized with dimethyl phthalate. This ketone peroxide is used as a radical initiator in the curing of unsaturated polyester resins in combination with cobalt accelerators.

Technical Data

Appearance	clear liquid
Desensitising agent	dimethyl phthalate
Active oxygen (AO)	ca. 9.1 % w/w
Hydrogen peroxide	ca. 1.7 % w/w
Water	ca. 1.5 % w/w
Density at 20 °C	ca. 1.1 g/cm ³
Viscosity at 20 °C	ca. 15 mPa·s
Flash point	> 80 °C
Critical temperature (SADT)	ca. 60 °C
Cold storage stability	below -20 °C
Recommended storage temperature	0 °C to 30 °C ●
Storage stability as from date of delivery	6 months

Standard Packaging

5 kg and 25 kg in HDPE canisters

Application

POLYESTER CURING:

CUROX®M-303 is a general purpose MEKP and is the “workhorse” of the United Initiators portfolio. It provides consistent curing performance in resins and gelcoats at ambient temperature.

Standard dosage level: 1 - 3 % with 0.5 - 2 % of a 1 % cobalt solution

The "Pot life" (gel time of resin + peroxide + accelerator) is relatively moderate compared to standard MEKP's and can be prolonged by adding Inhibitor TC 510.

CURING PERFORMANCE:

- Moderate evolution of heat
 - Medium reactivity in the MEKP-product range
- Temperatures below 20 °C prolong curing times considerably. Cobalt / amine accelerators or blends with acetylacetone peroxide should then be used.

PROCESSING METHODS:

Suitable applications are hand lay-up, spray-up, RTM, continuous laminating, centrifugal casting, filament winding, polyester concrete and vacuum infusion.

Decomposition Products

Possible detectable decomposition products: methyl ethyl ketone, acetic acid, ethane

Storage

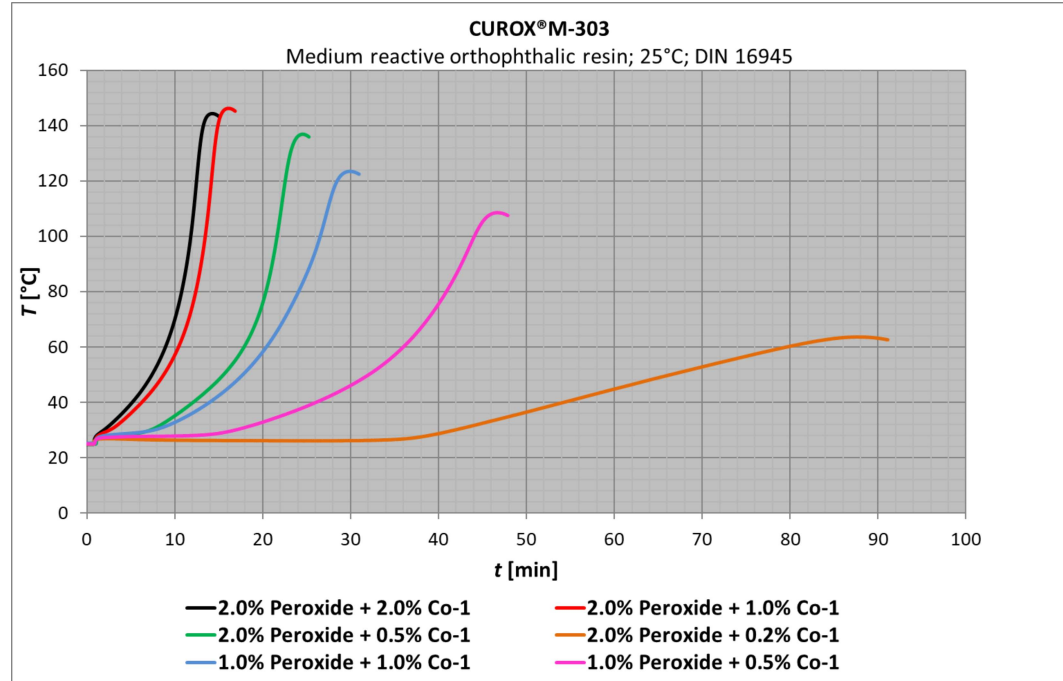
Avoid any source of heat, light, humidity and protect the product from impurities. Keep within save temperature limits.

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Measurements



Formulation (parts per weight)

Resin		100	100	100	100	100	100
CUROX®M-303	[Vol-%]	2.0	2.0	2.0	2.0	1.0	1.0
Co-1	[Vol-%]	2.0	1.0	0.5	0.2	1.0	0.5

Curing Data

Gel time 25 - 30 °C t_{gel}	[min]	1.9	2.6	7.2	41.9	7.6	16.9
Gel time 25 - 35 °C t_{gel}	[min]	3.7	4.7	10.0	48.2	11.4	22.0
Curing time t_{max}	[min]	14.3	16.1	24.5	87.4	29.9	46.6
Peak temperature T_{max}	[°C]	144	146	137	64	124	109

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