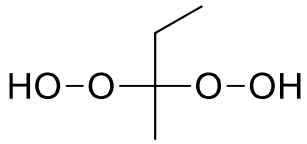
CUROX®M-303

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.

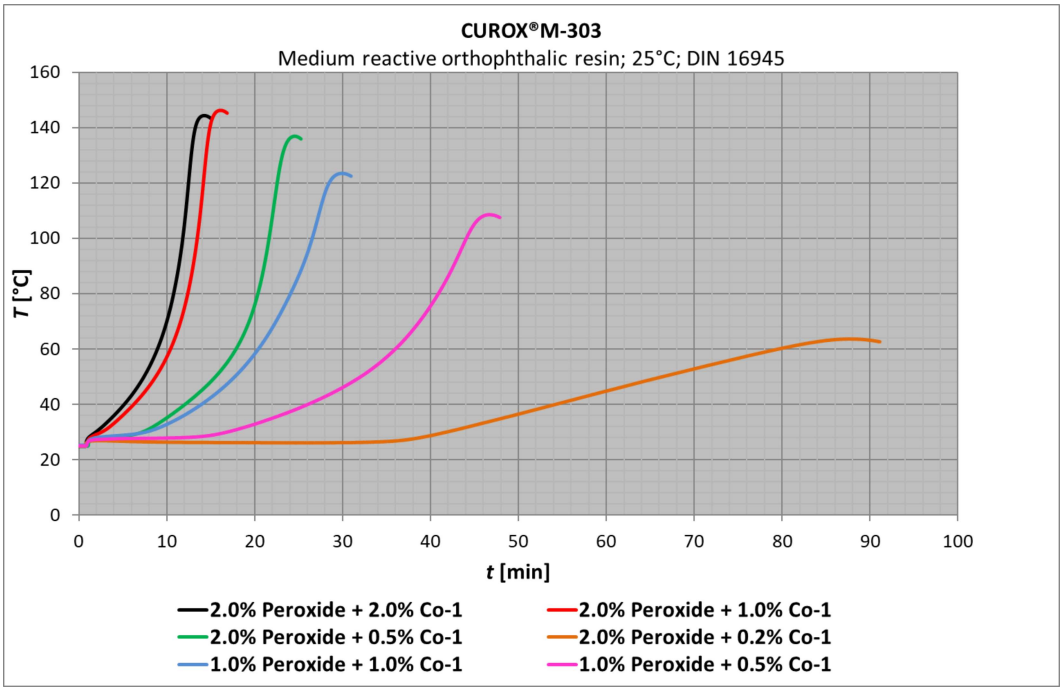
Decomposition Products

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.

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

United Initiators
Europe
T: +49 89 74422 237
F: +49 89 74422 6237
cs-initiators.eu@united-in.com

United Initiators
Nafta
T: +1 800 231 2702
F. +1 440 323 0898
cs-initiators.nafta@united-in.com

United Initiators
China
T: +86 21 6117 2758
F: +86 139 2503 8952
cs-initiators.cn@united-in.com

www.united-initiators.com