

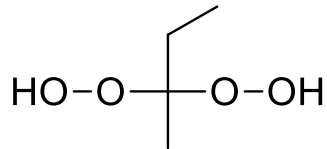
Technical Data Sheet (TDS)

CUROX[®]M-503
Thermoset (TS)

CUROX[®]M-503

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

Structural Formula



Description

Colorless liquid consisting of methyl ethyl ketone peroxides, phlegmatized with dimethyl phthalate. This ketone peroxide is suitable as a radical initiator for curing unsaturated polyester resins.

Main application: Curing of moulded parts at ambient temperature in combination with cobalt accelerators.

Technical Data

Appearance	colourless liquid
Desensitising agent	Dimethyl phthalate
Active oxygen (AO)	ca. 9.5 % w/w
Hydrogen peroxide	ca. 3.5 % w/w
Density at 20 °C	ca. 1.12 g/cm ³
Viscosity at 20 °C	ca. 20 mPa·s
Miscibility	Immiscible with water, miscible with ester, UP/VE-resins
Critical temperature (SADT)	ca. 60 °C
Cold storage stability	liquid to below - 25 °C
Recommended storage temperature	below 30 °C ●
Storage stability as from date of delivery	6 months

Standard Packaging

25 kg in HDPE canisters

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Application

POLYESTER CURING:

Curing agent for UP resins (e.g. *ortho*- and *iso*-phthalic acid resins) at ambient temperature in combination with cobalt accelerators. The "storage time" (gel time of resin + peroxide) is usually only a few hours and depends on temperature and resin type. The "pot life" (gel time of resin + peroxide + accelerator) is relatively short, but can be extended by adding an inhibitor (e.g. Inhibitor TC 510).

CURING PERFORMANCE:

Because of the high H₂O₂ content it is the fastest MEKP curing agent in our portfolio and therefore the resin must be processed quickly. Due to the fast curing time, a higher heat development is to be expected and stress cracks may occur. At temperatures below 20 °C, the curing times increase significantly. This product is not suitable for vinylester resins.

PROCESSING METHODS:

The product can be used in many different applications and is suitable for curing molded parts after different working processes, e.g. hand lamination, spray lay-up, centrifugal casting, filament winding, casting of resins. This product is not recommended for gelcoats.

Decomposition Products

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

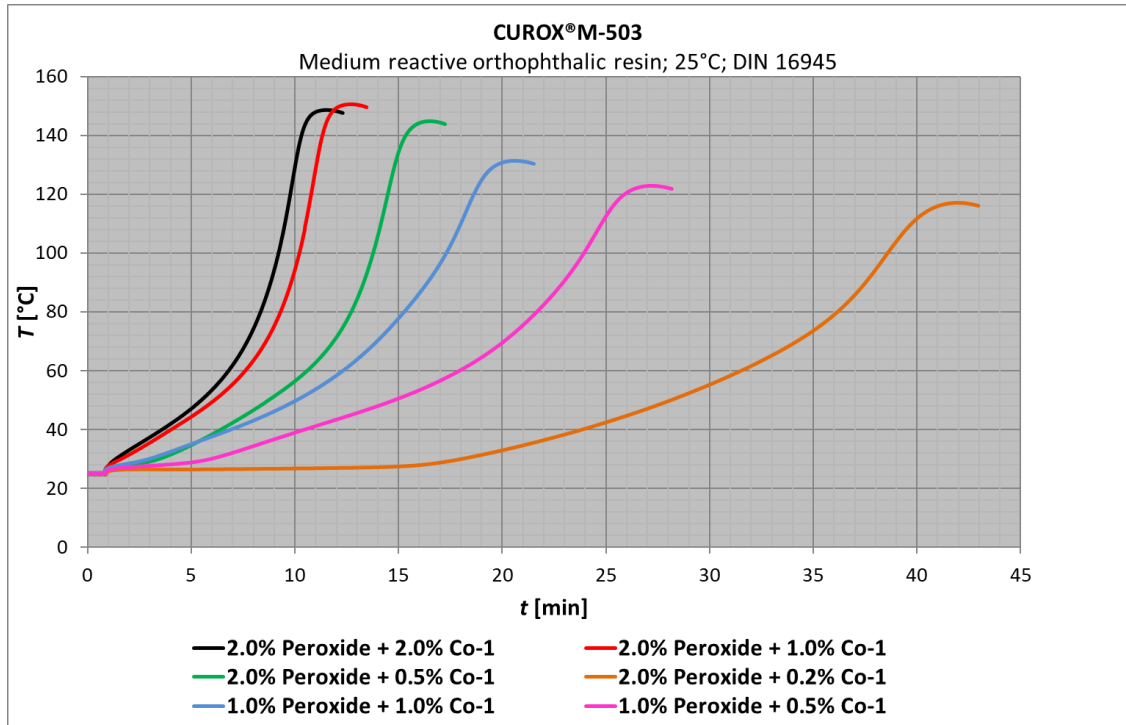
Storage

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

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Measurements



Formulation (parts per weight)

Resin		100	100	100	100	100	100
CUROX®M-503	[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]	1.4	1.6	3.5	18	3.0	5.9
Gel time 25 - 35 °C t_{gel}	[min]	2.5	2.9	5.2	21.2	5.0	8.1
Curing time t_{max}	[min]	11.6	12.7	16.5	41.8	20.6	27.1
Peak temperature T_{max}	[°C]	148	150	145	117	131	123

Disclaimer:

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