

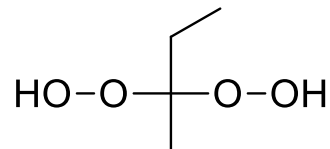
Technical Data Sheet (TDS)

CUROX[®]M-102
Thermoset (TS)

CUROX[®]M-102

Methyl ethyl ketone peroxide
CAS#1338-23-4
Colourless liquid mixture

Structural Formula



Description

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

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

Technical Data

Appearance	Colourless liquid
Desensitising agent	Aliphatic ester
Active oxygen (AO)	ca. 8.6 % w/w
Density at 20 °C	ca. 1.01 g/cm ³
Viscosity at 20 °C	ca. 13 mPa·s
Miscibility	Immiscible with water; miscible with ester and 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

22.5 kg in HDPE canisters

Technical Data Sheet (TDS)

CUROX[®]M-102
Thermoset (TS)

Application

POLYESTER CURING:

Curing agent for mainly vinyl ester resins, but also UP resins (e.g. *ortho*- and *iso*-phthalic acid resins) at ambient temperature in combination with cobalt or cobalt/amine 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).

This product does not contain any diacetone alcohol, which is particularly undesirable in drinking water applications.

CURING PERFORMANCE:

The moderate heat development results in a stress-relieved curing. Despite this, the residual styrene and TOC content are low. At temperatures below 20 °C, the curing times increase significantly. This product has the lowest H₂O₂ content in our MEKP portfolio. Therefore, it is recommended for vinyl ester resins. In UP resins the curing performance is very slow and it should be use a more active grades (e.g. CUROX[®]M-312 or CUROX[®]M-402).

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, and surface coatings (putties, fillers, gelcoats and topcoats).

Decomposition Products

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

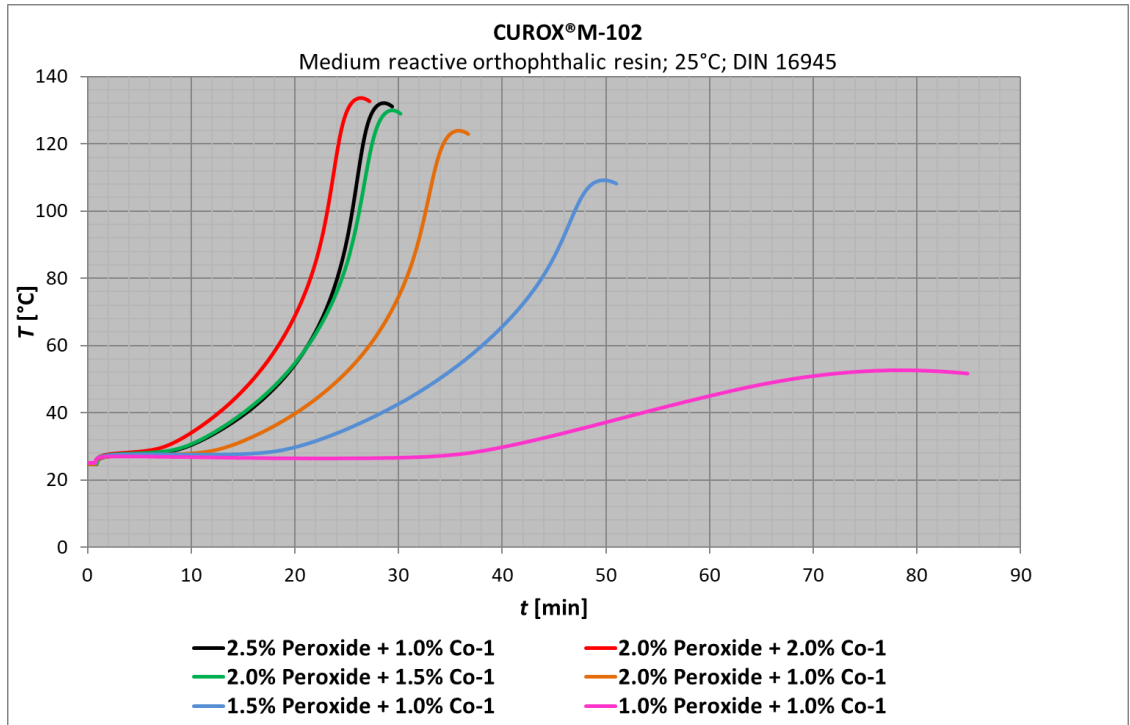
Storage

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

Technical Data Sheet (TDS)

CUROX®M-102
Thermoset (TS)

Measurements



Formulation (parts per weight)

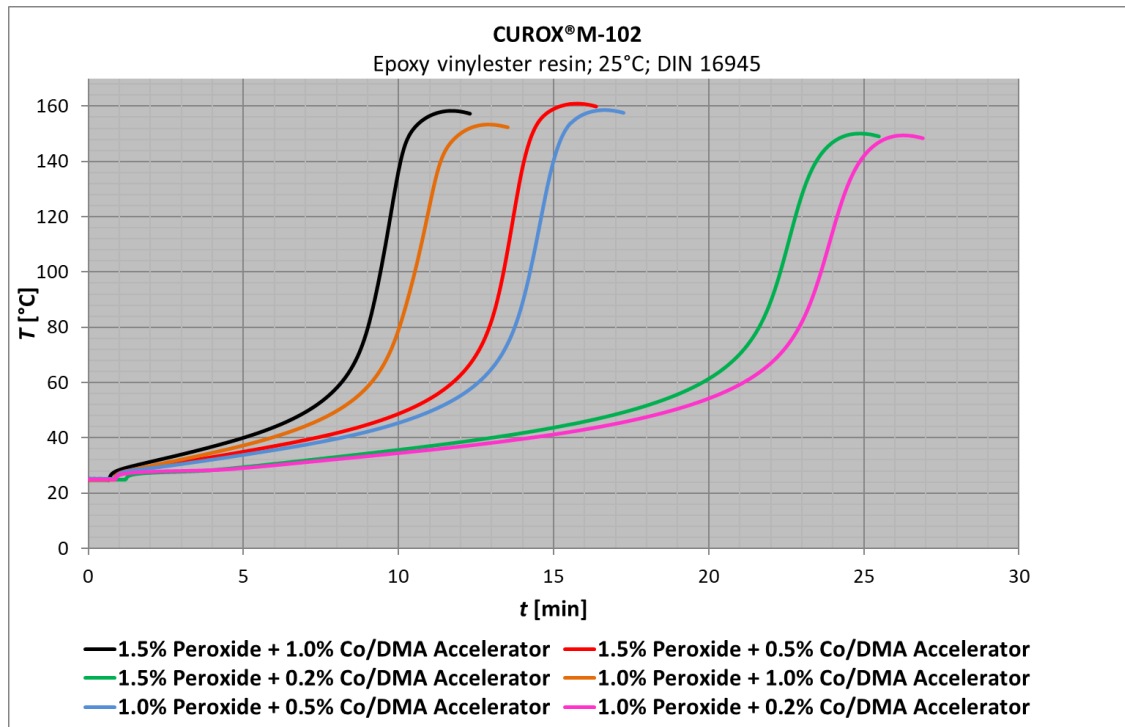
Resin		100	100	100	100	100	100
CUROX®M-102	[Vol-%]	2.5	2.0	2.0	2.0	1.5	1.0
Co-1	[Vol-%]	1.0	2.0	1.5	1.0	1.0	1.0

Curing Data

Gel time 25 - 30 °C t_{gel}	[min]	9.7	7.5	9.4	13.6	20.3	40.4
Gel time 25 - 35 °C t_{gel}	[min]	12.9	10.5	12.6	17.3	24.9	47.2
Curing time t_{max}	[min]	28.6	26.4	29.4	35.8	49.7	78.6
Peak temperature T_{max}	[°C]	132	133	130	124	109	52

Technical Data Sheet (TDS)

CUROX®M-102
Thermoset (TS)



Formulation (parts per weight)							
Resin		100	100	100	100	100	100
CUROX®M-102	[Vol-%]	1.5	1.5	1.5	1.0	1.0	1.0
Co/DMA Accelerator	[Vol-%]	1.0	0.5	0.2	1.0	0.5	0.2
Curing Data							
Gel time 25 - 30 °C t_{gel}	[min]	1.5	2.3	5.5	2.1	2.7	5.9
Gel time 25 - 35 °C t_{gel}	[min]	3.4	5.0	9.5	4.2	5.6	10.4
Curing time t_{max}	[min]	11.7	15.7	24.8	12.9	16.6	26.3
Peak temperature T_{max}	[°C]	158	160	150	153	159	149

Disclaimer:

The information contained herein and all further technical advice that may be provided by United Initiators reflects our current knowledge and experience based on our internal research and development as to our products and applications. United Initiators does not make any warranties about the information provided as to specific properties of products described their suitability for a particular application and representing complete instructions for use. Additionally, United Initiators does not make any warranties in respect of product and shelf-life properties. We are not legally responsible and liable for the use of any information provided, 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, strictly at your own risk and is the sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming products in order to verify their suitability for the intended application.

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 20 6131 1370
F: +86 139 2503 8952
cs-initiators.cn@united-in.com

United Initiators
Australia
T: +61 2 9316 0046
F: +61 2 9316 0034
cs-initiators.au@united-in.com

www.united-initiators.com