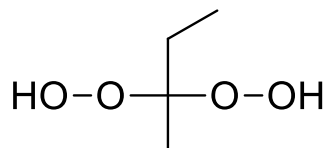


CUROX[®]M-102

Methylethylketonperoxid
CAS#1338-23-4
Farblose Flüssigkeit

Strukturformel



Beschreibung

Farblose Flüssigkeit, bestehend aus Methylethylketonperoxid, phlegmatisiert mit einem aliphatischen Ester. Dieses Ketonperoxid eignet sich als Radikalinitiator für die Härtung von ungesättigten Polyester- und Vinylesterharzen.

Hauptanwendung: Härtung von Formteilen bei Umgebungstemperatur in Kombination mit Cobaltbeschleuniger.

Technische Daten

Aussehen	farblose Flüssigkeit
Phlegmatisierungsmittel	aliphatischer Ester
Aktivsauerstoff (AO)	ca. 8,6 % w/w
Dichte bei 20 °C	ca. 1,01 g/cm ³
Viskosität bei 20 °C	ca. 13 mPa·s
Löslichkeit	nicht mischbar mit Wasser; mischbar mit Ester, UP/VE-Harzen
Kritische Temperatur (SADT)	ca. 60 °C
Kältebeständigkeit	bis unter -25 °C
Empfohlene Lagertemperatur	unter 30 °C ●
Lagerstabilität ab Datum der Anlieferung	6 Monate

Standardverpackung

22,5 kg in HDPE-Kanistern

Anwendung

POLYESTERHÄRTUNG:

Härter hauptsächlich für Vinylester-, aber auch UP-Harze (z. B. *ortho*- und Isophthalsäureharze) bei Raumtemperatur in Kombination mit Cobalt- oder Cobalt/Amin-Beschleunigern. Die „Lagerzeit“ (Gelzeit von Harz + Peroxid) beträgt in der Regel nur wenige Stunden und ist abhängig von Temperatur und Harztyp. Die „Topfzeit“ (Gelzeit von Harz + Peroxid + Beschleuniger) ist relativ kurz, kann aber durch Zugabe eines Inhibitors (z. B. Inhibitor TC 510) verlängert werden.

Dieses Produkt enthält keinen Diacetonalkohol, der insbesondere bei Trinkwasseranwendungen unerwünscht ist.

HÄRTUNGSSCHARAKTERISTIK:

Die moderate Wärmeentwicklung führt zu einer spannungsarmen Aushärtung. Trotzdem sind die Reststyrol- und TOC-Gehälter der finalen Produkte gering. Bei Temperaturen unter 20 °C verlängern sich die Aushärtezeiten deutlich. Dieses Produkt hat den niedrigsten H₂O₂-Gehalt in unserem MEKP-Portfolio. Daher wird es für Vinylesterharze empfohlen. Bei UP-Harzen ist die Härtingsleistung sehr langsam und es sollten eher aktivere MEKP-Typen verwendet werden (z.B. CUROX®M-312 oder CUROX®M-402).

ARBEITSVERFAHREN:

Das Produkt ist vielseitig einsetzbar und eignet sich zur Aushärtung von Formteilen nach unterschiedlichen Verarbeitungsprozessen, z.B. Handlamination, Harz/Faser-Spritzen, Schleudern, Wickeln, Gießen und Oberflächen Beschichtungen (Spachtel, Füllmassen, Gel- und Topcoats).

Zersetzungsprodukte

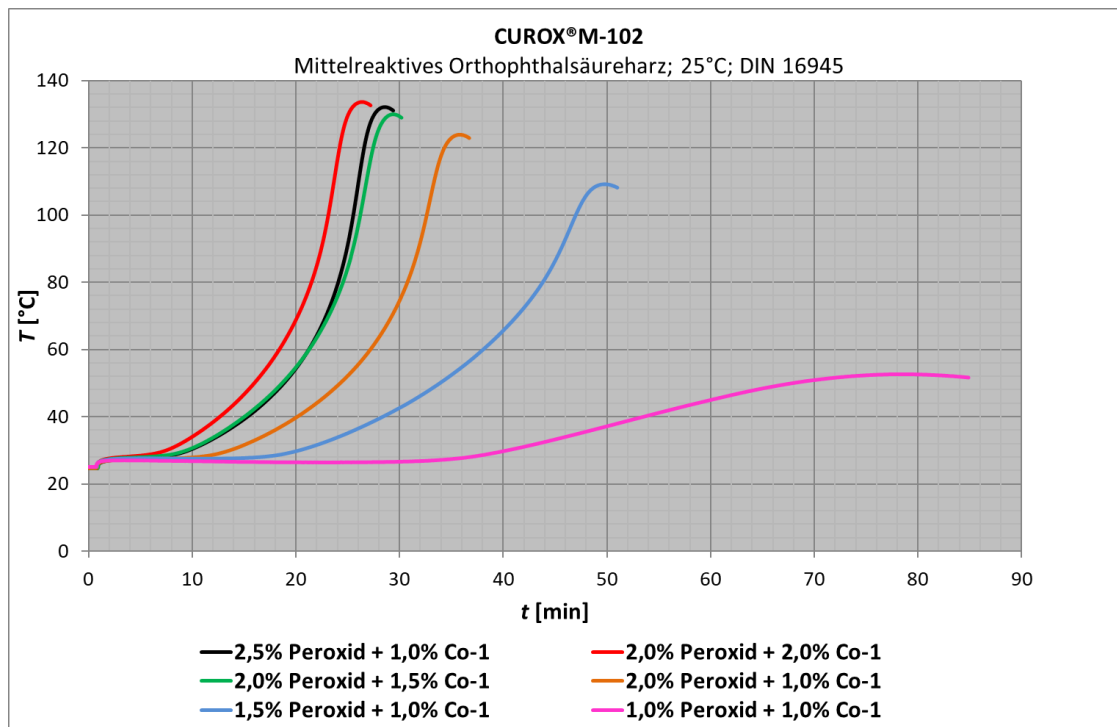
Evtl. nachweisbare Zersetzungsprodukte: Methylethylketon, Ethan, Essigsäure

Lagerung

Schützen Sie das Produkt vor jeglichen Quellen von Hitze, Licht und Feuchtigkeit, sowie vor Verunreinigungen.

Lagern Sie das Produkt bei der vorgeschriebenen Temperatur.

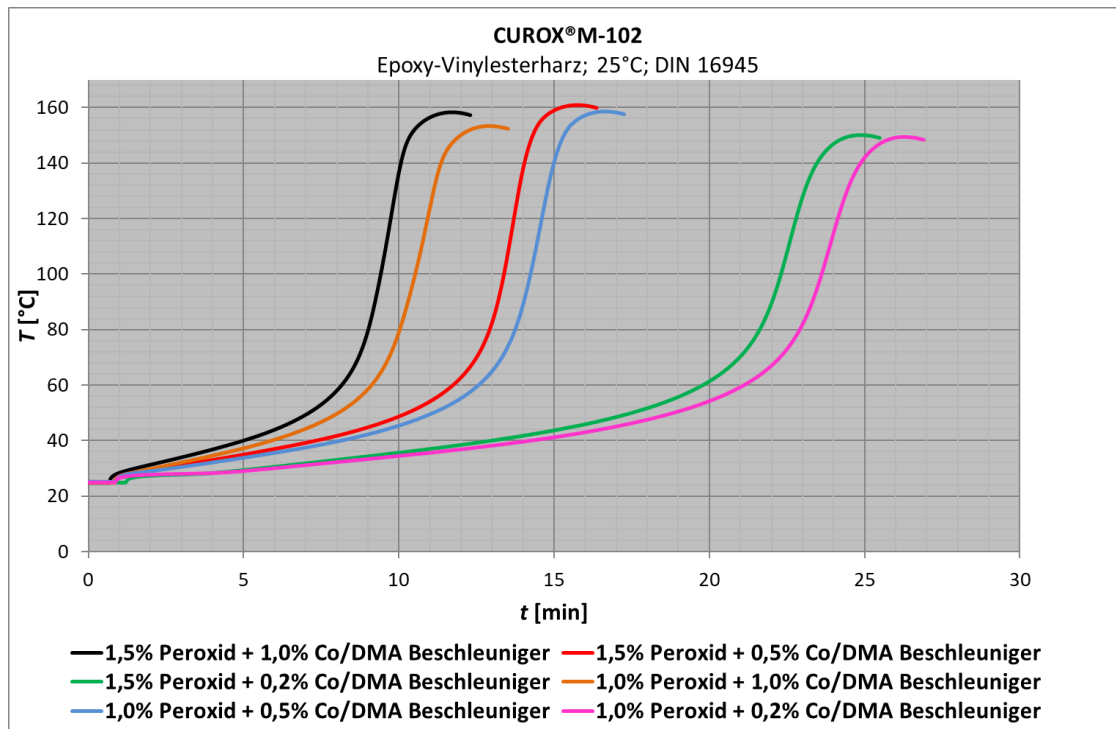
Messungen



Formulierung (Gewichtsteile)							
Harz		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
Härtungsdaten							
Gelierzeit 25 - 30 °C t_{gel}	[min]	9,7	7,5	9,4	13,6	20,3	40,4
Gelierzeit 25 - 35 °C t_{gel}	[min]	12,9	10,5	12,6	17,3	24,9	47,2
Härtungszeit t_{max}	[min]	28,6	26,4	29,4	35,8	49,7	78,6
Peaktemperatur T_{max}	[°C]	132	134	130	124	109	53

Technisches Datenblatt (TDS)

CUROX®M-102
Thermoset (TS)



Formulierung (Gewichtsteile)							
Harz		100	100	100	100	100	100
CUROX®M-102	[Vol-%]	1,5	1,5	1,5	1,0	1,0	1,0
Co/DMA Beschleuniger	[Vol-%]	1,0	0,5	0,2	1,0	0,5	0,2
Härtungsdaten							
Gelierzeit 25 - 30 °C t_{gel}	[min]	1,5	2,3	5,5	2,1	2,7	5,9
Gelierzeit 25 - 35 °C t_{gel}	[min]	3,4	5	9,5	4,2	5,6	10,4
Härtungszeit t_{max}	[min]	11,7	15,7	24,8	12,9	16,6	26,3
Peaktemperatur T_{max}	[°C]	158	160	150	153	159	149

Disclaimer:

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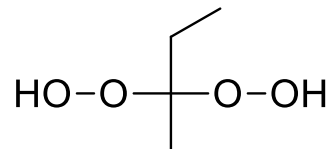
Technical Data Sheet (TDS)

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

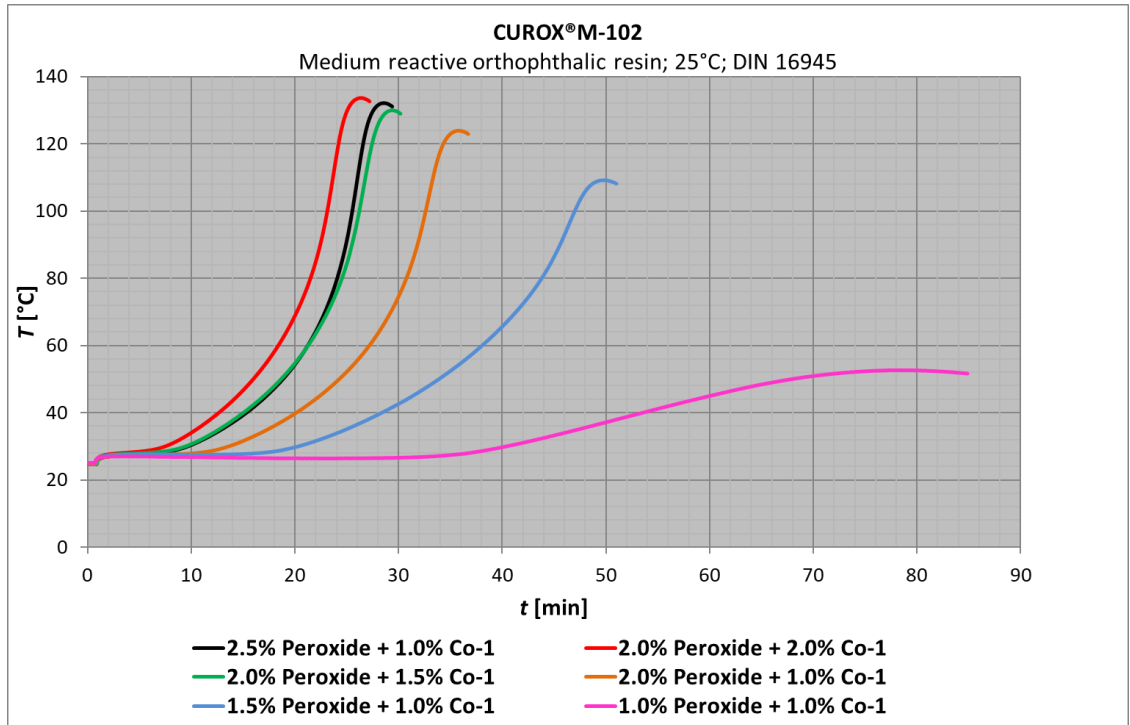
Storage

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)

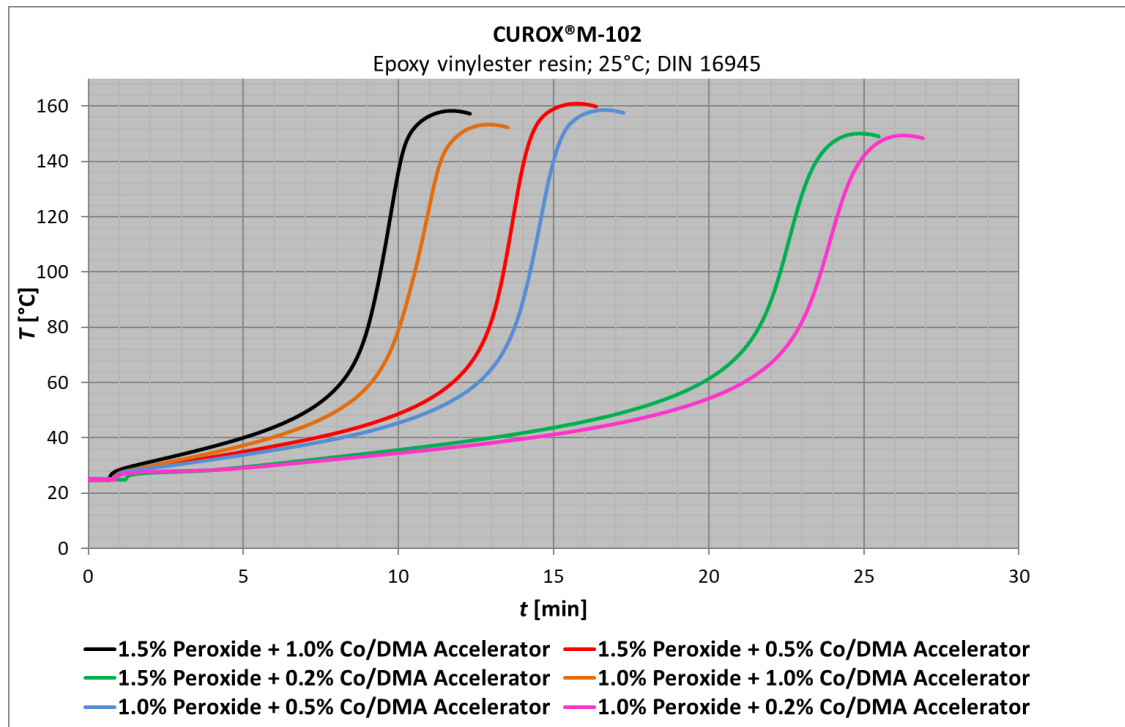
Measurements



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

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