

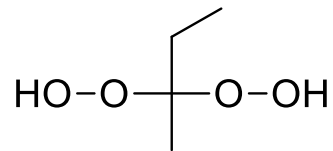
# Technical Data Sheet (TDS)

CUROX<sup>®</sup>M-102R  
Thermoset (TS)

## CUROX<sup>®</sup>M-102R

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

### Structural Formula



### Description

Red 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.

**Advantages:** Due to the red coloured peroxide, homogenisation in the resin can be controlled. Red colour disappears after curing.

### Technical Data

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

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## Application

### **POLYESTER CURING:**

Curing agent mainly for 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 H<sub>2</sub>O<sub>2</sub> 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<sup>®</sup>M-312R or CUROX<sup>®</sup>M-402R).

### **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

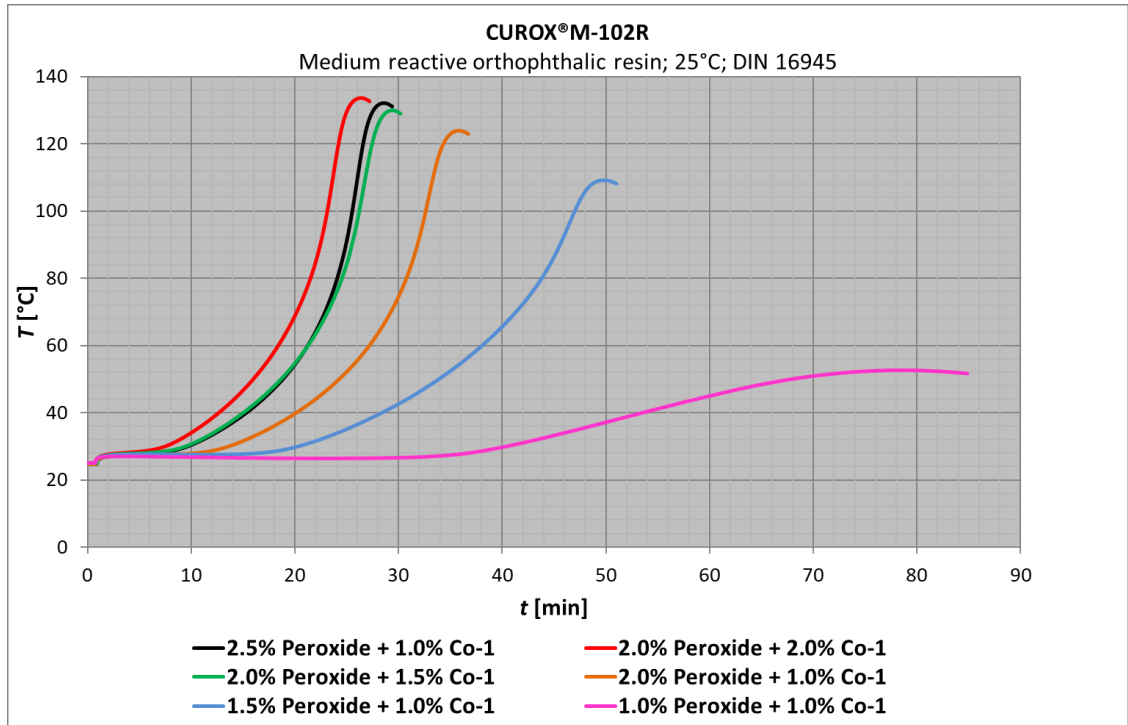
Avoid any source of heat, light, humidity and protect the product from impurities. Keep within safe temperature limits.

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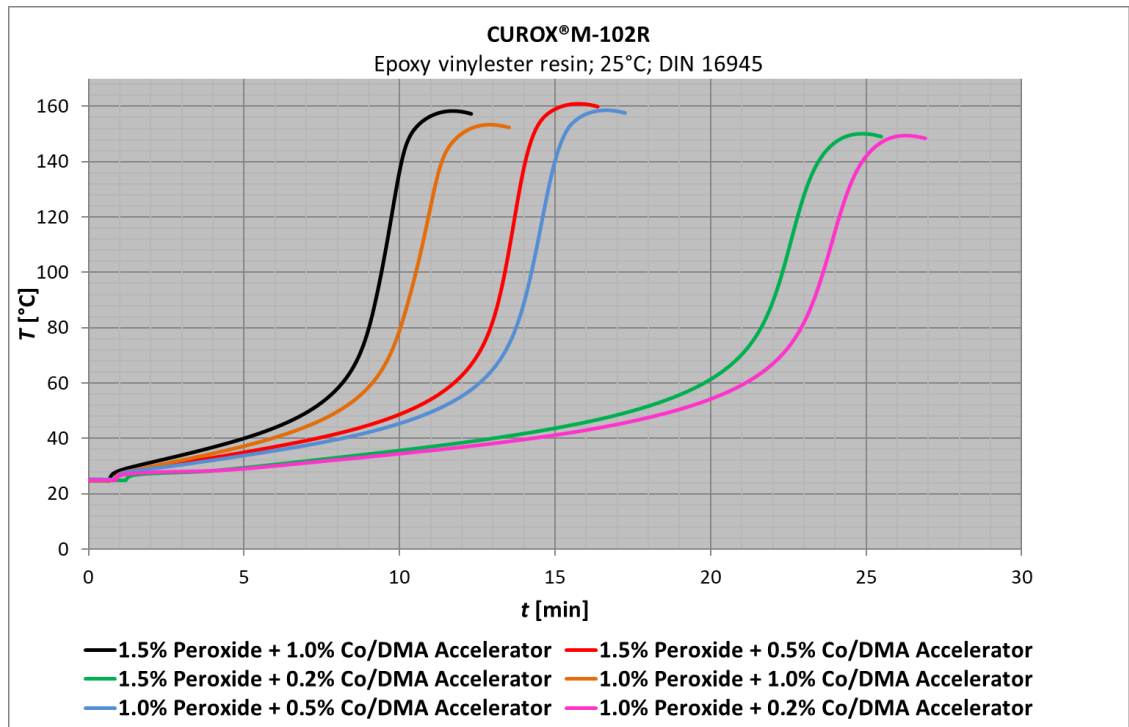
## Measurements



<b>Formulation (parts per weight)</b>							
Resin		100	100	100	100	100	100
<b>CUROX®M-102R</b>	[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
<b>Curing Data</b>							
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

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

## Disclaimer:

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