

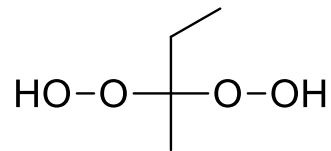
# Technical Data Sheet (TDS)

CUROX<sup>®</sup>M-312R  
Thermoset (TS)

## CUROX<sup>®</sup>M-312R

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

### Structural Formula



### Description

Red, mobile liquid, consisting of peroxides based on methyl ethyl ketone, essentially desensitised with aliphatic ester. This ketone peroxide is used as a radical initiator in the curing of unsaturated polyester resins.

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

**Advantages:** Due to the red coloured peroxide, homogenisation in the resin can be controlled and after curing the red colour disappeared. High efficiency with special pre-accelerated and stabilised resin types.

### Technical Data

Appearance	red liquid
Desensitising agent	aliphatic ester
Active oxygen (AO)	ca. 8.6 - 9.2 % w/w
Hydrogen peroxide	ca. 2.6 % w/w
Density at 20 °C	ca. 1.01 g/cm <sup>3</sup>
Viscosity at 20 °C	ca. 13 mPa·s
Refractive index at 20 °C	ca. 1.431
Flash point	ca. 57 °C
Critical temperature (SADT)	ca. 60 °C
Cold storage stability	ca. -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<sup>®</sup>M-312R  
Thermoset (TS)

## Application

### POLYESTER CURING:

Curing agent for all UP resins at ambient temperature in combination with cobalt accelerators. Especially suitable for resins based on *ortho*- and *iso*-phthalic acid respectively.

Standard dosage level: 1 - 3 % with additional use of 0.5 - 2 % of a 1 % cobalt solution.

"Shelf life" (gel time of resin + peroxide) usually only a few hours, depending on temperature and resin type.

"Pot life" (gel time of resin + peroxide + accelerator) relatively short, but maybe be prolonged by adding Inhibitor TC 510. Thus, the mould release factor ( $f_{MR} = t_{MR}/t_{gel}$ ) can be improved considerably.

### CURING PERFORMANCE:

Moderate evolution of heat. Relatively long mould release time, moderate mould release factors. Temperatures below 20 °C prolong curing times considerably, alternatively cobalt / amine accelerators should then be used.

### PROCESSING METHODS:

Particularly hand lay-up, spray lay-up, centrifugal casting, filament winding, casting of resins, and surface coatings (putties, fillers, gelcoats and topcoats).

### SPRAY EQUIPMENT:

Use spray equipment in accordance with manufacturer's instructions. Ensure all safety devices are operational. Do not clear gun by spraying MEKP into the air.

## Decomposition Products

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

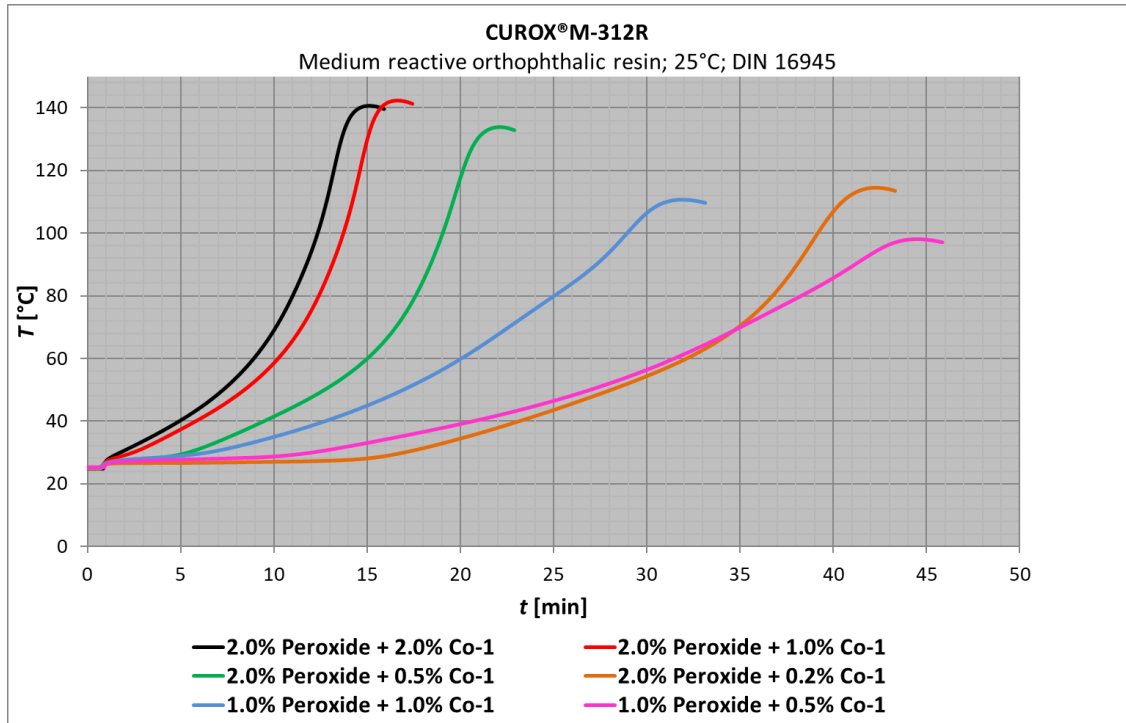
## Storage

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

# Technical Data Sheet (TDS)

CUROX<sup>®</sup>M-312R  
Thermoset (TS)

## Measurements



<b>Formulation (parts per weight)</b>							
Resin		100	100	100	100	100	100
<b>CUROX<sup>®</sup>M-312R</b>	[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
<b>Curing Data</b>							
Gel time 25 - 30 °C $t_{gel}$	[min]	1.8	2.5	5.4	17.0	6.5	12.1
Gel time 25 - 35 °C $t_{gel}$	[min]	3.4	4.2	7.6	20.4	9.8	16.8
Curing time $t_{max}$	[min]	15.1	16.6	22.1	42.3	32	44.3
Peak temperature $T_{max}$	[°C]	140	142	134	115	111	98

## 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](mailto: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](mailto: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](mailto:cs-initiators.cn@united-in.com)