

Technical Data Sheet (TDS)

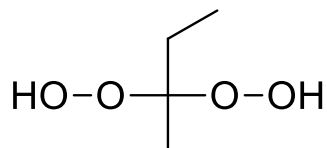
CUROX[®]M-312R
Thermoset (TS)



CUROX[®]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. Red colour disappears after curing.
High efficiency with special pre-accelerated and stabilised resin types.

Technical Data

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

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

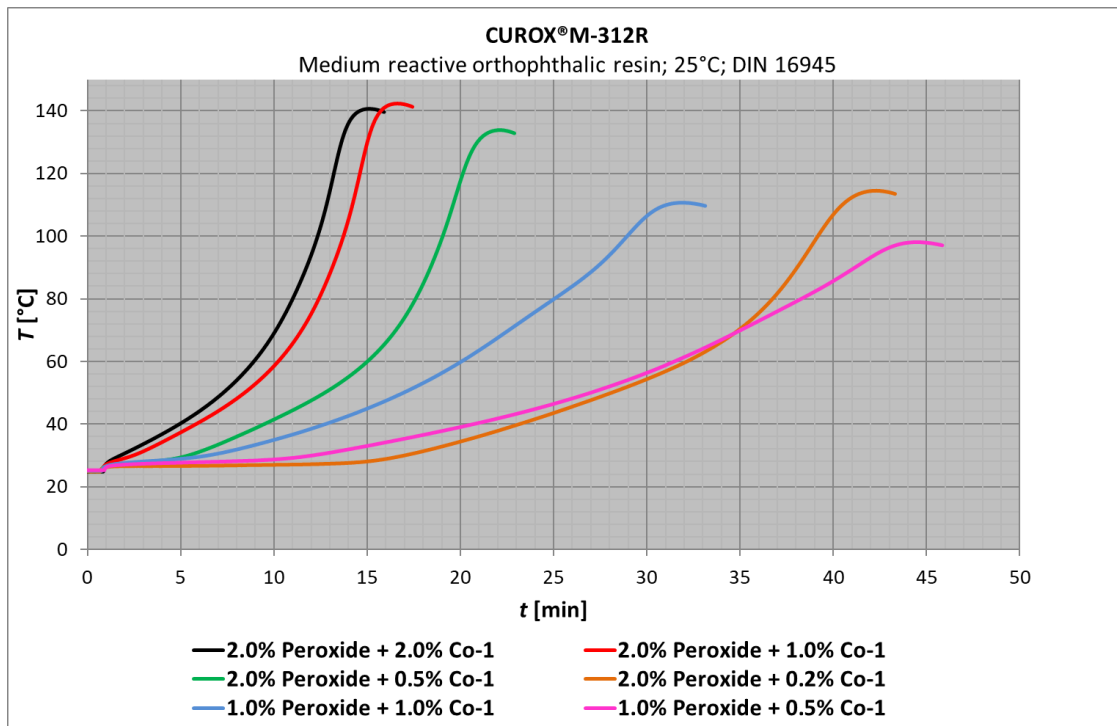
Avoid any source of heat, light, humidity and protect the product from impurities. Keep within save temperature limits.

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Measurements



Formulation (parts per weight)

Resin		100	100	100	100	100	100
CUROX [®] M-312R	[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]	1.8	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

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