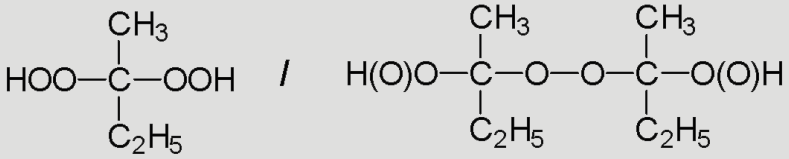
# CUROX® M-312R

Technical Data Sheet - Thermosets - Ketone peroxides (Ambient temperature)



| | |
|---|---|
| Chemical Name | Methylethyl ketoneperoxide |
| CAS-No. | 1338-23-4 |
| Properties | Liquid mixture, red coloured |

**Description**

Red coloured, mobile liquid, consisting of peroxides based on methyl ethyl ketone, essentially desensitised with aliphatic ester. This ketone peroxide is used as an initiator (radical source) in the curing of unsaturated polyester resins.
Special 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 preaccelerated and stabilized resin types.
Main application: curing of moulded parts at ambient temperature in combination with cobalt accelerators.

**Technical Data**

| Property | Characteristics / Value |
|---|---|
| Appearance | red coloured liquid |
| Active oxygen | ca. 8.6 - 9.1 % w/w |
| De-sensitising agent | aliphatic ester |
| Density at 20°C | ca. 1.01 g/cm³ |
| Viscosity at 20°C | ca. 13 mPas |
| Miscibility | immiscible with water, miscible with ester, alcohol |
| Critical temperature (SADT) | >50 °C |
| Cold storage stability | liquid to below -25 °C |
| Recommended storage temperature | below 30 °C |
| Storage stability (activity) as from date of delivery | 6 months |



Contact: http://www.united-initiators.com/

**This product is in compliance with the ElektroG (EU-Directives: RoHS 2002/95/EG, WEEE 2002/96/EG)**

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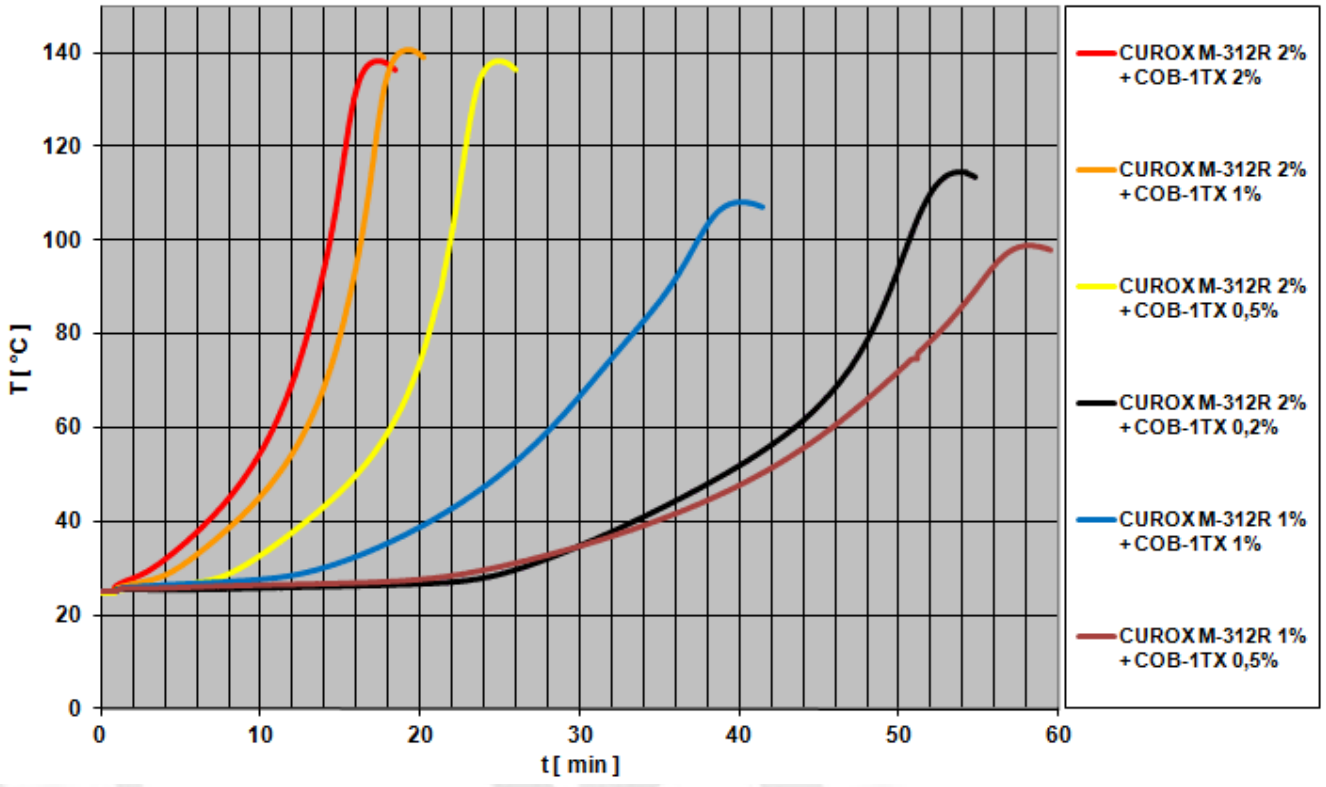
**Activity:**

| "Cobalt Curing" after DIN 16945 at 25°C with OPA resin (20g in a test tube) | | | | | | |
|---|---|---|---|---|---|---|
| Formulation (parts by weight) | | | | | | |
| Medium reactive resin type (OPA) | 100 | 100 | 100 | 100 | 100 | 100 |
| CUROX® M-312R | 2 | 2 | 2 | 2 | 1 | 1 |
| Accelerator COB-1TX | 2 | 1 | 0.5 | 0.2 | 1 | 0.5 |
| Curing data | | | | | | |
| Gel time $t_{gel}$ [min] | 3.5 | 4.5 | 8.5 | 26.0 | 13.5 | 24.0 |
| Curing time $t_{max}$ [min] | 17.0 | 19.0 | 25.0 | 53.5 | 40.0 | 59.5 |
| Peaktemperature $T_{max}$ [°C] | 139 | 141 | 137 | 115 | 109 | 93 |



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## Application

POLYESTER CURING:
Curing agent for all UP resin types at ambient temperature in combination with cobalt accelerators. Standard dosage level: 1-3% as supplied, with 0.2-2% 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 may be prolonged by adding Inhibitor TC-510. Thus, the mould release factor (fMR = tMR/tgel) 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.

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