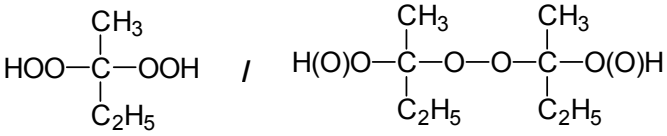
Hardener Technical Data Sheet

Polyester Curing
Ketone peroxides (Ambient temperature)

CUROX M-200

Methyl ethyl ketone peroxide
CAS#1338-23-4
Liquid mixture



Description:

Colourless, mobile liquid, consisting of peroxides based on methyl ethyl ketone, essentially desensitised with phtalate plasticiser. This ketone peroxide is used as an initiator (radical source) in the curing of unsaturated polyester resins. Main application: curing of moulded parts at ambient temperature in combination with cobalt accelerators.

Technical Data:

Appearance	colourless liquid
Active oxygen	ca. 8.8 – 9.4% w/w
De-sensitising agent	phtalate
Densitiy at 20°C	ca. 1.1 g/cm^3
Viscosity at 20°C	ca. 30 mPa•s
Miscibility	immiscible with water, soluble in phthalates
Critical temperature (SADT)	ca. 60°C
Cold storage stability	to below -25°C
Recommended storage temperature	below 30°C
Maintenance of activity at 25°C	min. 6 months

Application:

POLYESTER CURING: Standard curing agent for all UP resin types at ambient temperature in combination with cobalt accelerators. Especially suitable for resins based on ortho- and isophtalic acid respectively. 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 (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.

CUROX M-200

Activity:

"Cobalt Curing" of 2 mm GRP laminates at 23°C						
Formulation (parts by weight)						
Highly reactive o-phthalic acid resin Type	100	100	100	100	100	100
CUROX® M-200	2	2	2	2	1	1
Accelerator C-101	2	1	0.5	0.2	1	0.5
Cure times (minutes)						
Gel time (t_{gel}) at 23°C	4.5	6.0	12	21	15	24
Mould release time (t_{MR}) at 23°C	40	50	90	145	125	195
Mould release factor ($f_{MR} = t_{MR}/t_{gel}$)	8.9	8.3	7.8	6.9	8.3	8.1