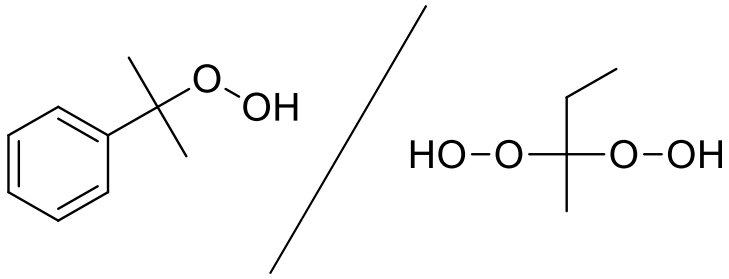
NOROX®MCP

Methyl ethyl ketone peroxide; cumene hydroperoxide
CAS#1338-23-4; 80-15-9
Pale yellow liquid

Structural Formula



Description

NOROX®MCP is a solution of methyl ethyl ketone peroxide and cumene hydroperoxide in phlegmatiser.
It is used as a liquid polymerisation initiator for ambient temperature curing of unsaturated polyester and vinylester resins with the following advantages/properties:

- Very low peak exotherm temperature
- Longer working time (gel time) than standard MEKP
- Excellent final cure - both thin and thick laminates
- Low impurity level (water, MEK, salts)
- Less shrinkage and stress problems

Technical Data

Appearance	pale yellow liquid
Active oxygen (AO)	8.7 - 9.0 % w/w
Density at 20 °C	1.08 - 1.11 g/cm³
Viscosity at 20 °C	8 - 14 mPa·s
Flash point (Seta closed up)	> 65 °C
Miscibility	miscible in oxygenated organic solvents
Critical temperature (SADT)	60 °C
Recommended storage temperature	max. 30 °C
Storage stability as from date of delivery	6 months

Standard Packaging

25 kg in HDPE canisters

Application

CURING PERFORMANCE:

NOROX®MCP FRED has a flat and low exothermic reaction curve for a good final cure within 24 h. This curing behaviour reduces stress, cracking and shrinkage problems in laminates & castings.

Less shrinkage also means less fibre print through gelcoated surfaces.
The gel time and cure time is slower compared to standard MEKP products but final cured resin hardness is often better in comparison to resins initiated with standard MEKPs.

NOROX®MCP can be used, if you want to build up thick laminates in one step, or if the laminate has big variations in thickness, or when you have high resin loadings.

PROCESSING METHODS:

Vacuum bag moulding of big units, filament winding of pipes & tanks with thicker laminates or polyester concrete systems with high resin-to-filler ratio

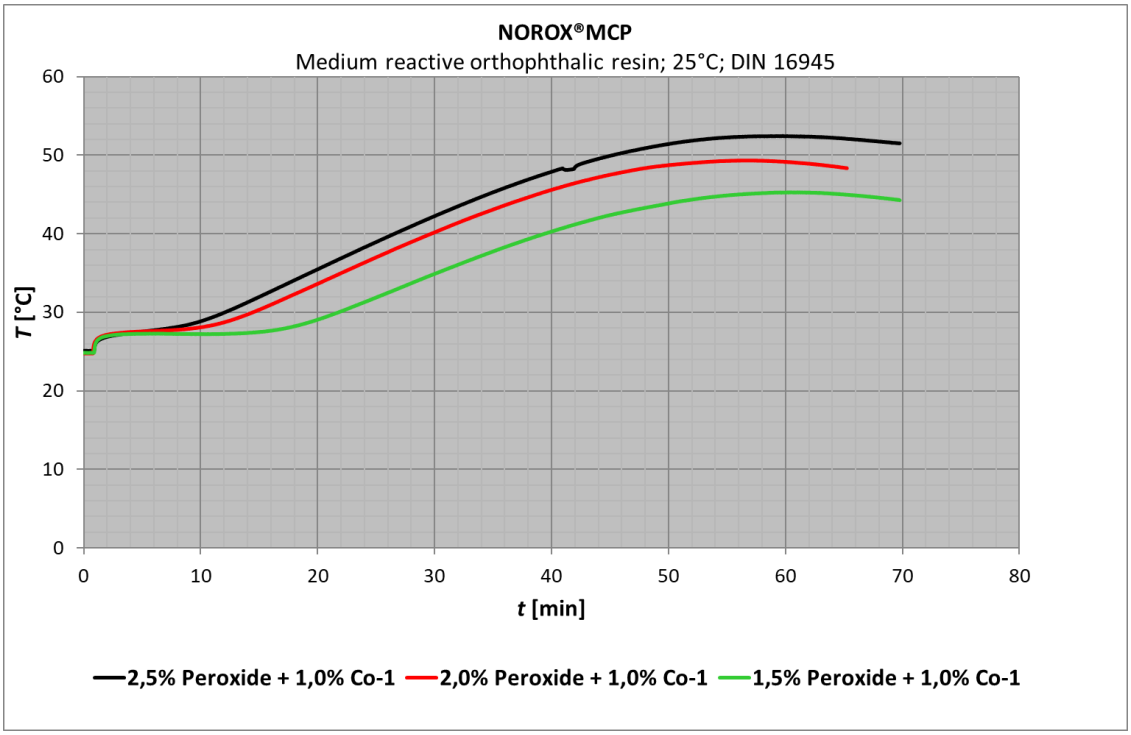
Decomposition Products

Possible detectable decomposition products: methyl ethyl ketone, acetic acid, acetophenone, 2-phenyl-2-propanol, methane

Storage

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

Measurements



Formulation (parts per weight)				
Resin		100	100	100
NOROX®MCP	[Vol-%]	2.5	2.0	1.5
Co-1	[Vol-%]	1.0	1.0	1.0
Curing Data				
Gel time 25 - 30 °C t_{gel}	[min]	12.1	14.5	21.8
Gel time 25 - 35 °C t_{gel}	[min]	19.3	22.0	30.2
Curing time t_{max}	[min]	59.8	56.3	61.2
Peak temperature T_{max}	[°C]	52	49	45

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