

NOROX®MCP-99

Methyl ethyl ketone peroxide; cumylhydroperoxide
CAS#1338-23-4; 80-15-9
Liquid mixture

Description

NOROX®MCP-99 is a peroxide mixture based on Methyl ethyl ketone in phlegmatizer.
NOROX®MCP-99 is a liquid polymerisation initiator for the room temperature cure of unsaturated polyester with the following advantages/properties:

- Very low peak exotherm temperature
- Gel time close to standard MEKP
- Excellent final cure – both in thin and thick laminates
- Low impurity levels (water, MEK, salts)
- Less shrinkage and stress problems

Technical Data

| | |
|---|-------------------------------|
| Appearance | Pale yellow liquid |
| Active oxygen | 9.1 – 9.5 % |
| Density at 20 °C | 1.09 – 1.13 g/cm ³ |
| Viscosity at 20 °C | 9 - 15 mPa.s |
| Flash point (Seta closed cup) | > 65 °C |
| Critical temperature (SADT) | 60 °C |
| Soluble in | Oxygenated organic solvents |
| Slightly soluble in | Water |
| Recommended storage temperature | Max 30 °C. |
| Maintenance of activity at 30 °C as from date of delivery | 6 months |

Application

NOROX®MCP-99 has a flat and low exotherm curve which ends up in a good 24h cure. This curing behaviour reduces stress, cracking and shrinkage problems in laminates & castings. Less shrinkage also means less fibre print through of gelcoated surfaces. The gel time is similar or slightly slower compared to standard MEKP products. NOROX®MCP-99 can be used when 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. Typical applications are vacuum bag moulding of big units, filament winding of pipes & tanks with thicker laminates or polyester concrete systems with high resin-to-filler ratio.

Technical Data Sheet

Measurements

Test: Reactivity, Barcol analysis and Residual Styrene in laminates
Resin: DCPD modified, pre-accelerated polyester.
Temp: 23°C

| Initiator | Dosage. % | Laminate thickness mm | Gel time min | Time to peak min | Peak °C | Barcol Hardness 934 | |
|---------------------|--------------|-----------------------------|--------------------|------------------------|------------|------------------------|-----------|
| | | | | | | 4h | 24h |
| NOROX®MCP-99 | 2,0 | 5 | 28 | 53 | 31 | 18 | 35 |
| NOROX®MCP-99 | 2,0 | 10 | 28 | 50 | 52 | 14 | 37 |
| NOROX®KP-9 | 1,5 | 5 | 25 | 48 | 37 | 15 | 26 |
| NOROX®KP-9 | 1,5 | 10 | 25 | 43 | 89 | 34 | 36 |

Residual styrene analysis

| Initiator | Dosage. % | Laminate thickness mm | RS 4h % | RS 24h % |
|---------------------|--------------|-----------------------------|------------|-------------|
| NOROX®MCP-99 | 2,0 | 1,5 | 4,5 | 2,1 |
| NOROX®MCP-99 | 1,0 | 12 | 2,1 | 1,2 |
| NOROX®KP-9 | 2,0 | 1,5 | 3,6 | 2,1 |
| NOROX®KP-9 | 1,0 | 12 | 3,1 | 2,6 |

Standard Packaging

- The standard package sizes of NOROX®MCP-99 are 5 kg and 25 kg polyethylene bottles.

Disclaimer

This information and all further technical advice are reflecting our present knowledge and experience based on internal tests with local raw materials with the purpose to inform about our products and applications. The information should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part, 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.

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United Initiators
EU
T: +49 89 74422 237
F: +49 89 74422 6237
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

United Initiators
China
T: +86 20 6131 1370
F: +86 139 2503 8952
cs-initiators.cn@united-in.com

United Initiators
Australia
T: +61 2 9316 0046
F: +61 2 9316 0034
cs-initiators.au@united-in.com

www.united-initiators.com

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