

## NOROX®KP-100 FRED-3

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

### Description

NOROX®KP-100 FRED-3 is a Red dyed, mobile liquid, consisting of peroxides based on methylethylketone, essentially desensitized with phthalate plasticizer. This ketone peroxide is used as an initiator (radical source) in the curing of unsaturated polyester resins. Main application: curing of molded, casted or winded glasfibre reinforced products at ambient temperature in combination with cobalt accelerators. This red dyed version helps to control homogenous mixing and during curing discoloration will take place again.

### Technical Data

Appearance	Red and clear liquid
Active oxygen	9.7 ± 0.1 %
Free hydrogen peroxide content	2.2 ± 0.1 %
Water content	2.0 %
Flash point (Seta Flash):	> 80 °C
Density at 20 °C	1.12 – 1.15 g/cm <sup>3</sup>
Viscosity at 20 °C	9 - 15 mPa.s
pH	4 - 7
Critical temperature (SADT)	65 °C
Recommended storage temperature	Max. 30°C
Soluble in	Oxygenated organic solvents
Slightly soluble in	Water
Maintenance of activity at 30 °C as from date of delivery	6 months

### Application

NOROX®KP-100 FRED-3 is a general purpose MEKP and gives consistent room temperature performance with both polyester resins and gelcoats. NOROX®KP-100 FRED-3 has higher active oxygen and hydrogen peroxide level than NOROX®KP-9, which is suitable when you want to speed up your gel and cure time. A reliable product of remarkable purity, NOROX®KP-100 FRED-3 assures quality in almost every system. Suitable applications are: Hand lay-up, spray-up, RTM, continuous laminating, centrifugal casting, filament winding and polyester concrete.

A single MEKP initiator formulation cannot provide optimum results in all resin systems. Evaluation of each MEKP in each resin intended for use is absolutely essential before full-scale manufacturing is attempted.

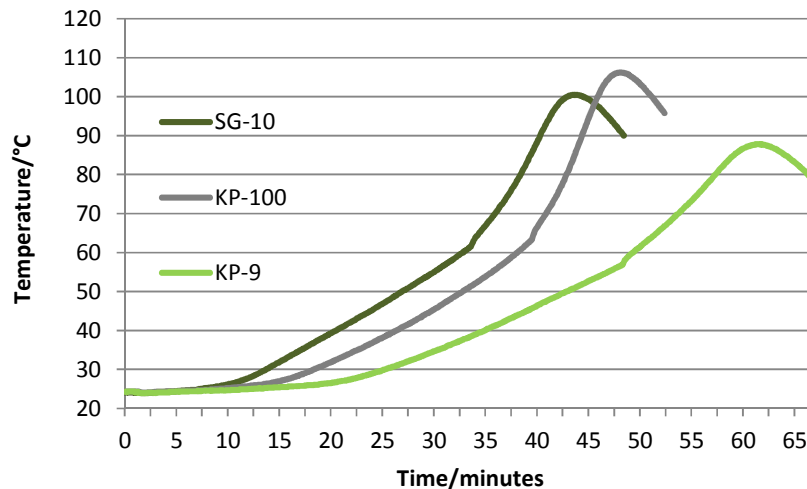
## CURE CHARACTERISTICS

A reactivity test with an unsaturated polyester resin gave the following results:

Resin: Orthophthalic polyester      Temperature: 25°C  
Initiator %: 1.5      Accelerator %: 0.5% (1% cobalt)

Initiator	Gel time Min	Time to peak min	Peak exotherm temp °C
<b>NOROX®KP-100 FRED-3</b>	<b>18</b>	<b>48</b>	<b>106</b>
NOROX®KP-9	25	61	88
NOROX®SG-10	13	44	101

## Reactivity of NOROX® MEKPs:



## Standard Packaging

The standard package sizes of NOROX®KP-100 FRED-3 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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