



**LUPEROX® K1**

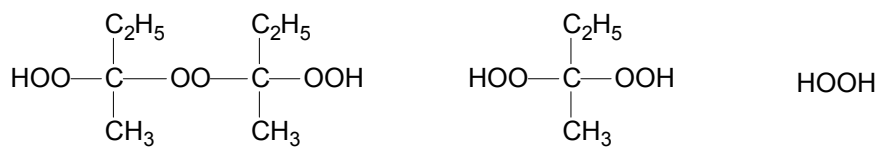
Methyl Ethyl Ketone Peroxide

CAS Nr.: 1338-23-4

EINECS: 215-661-2

Luperox® K1 is standard methyl ethyl ketone peroxide used for the unsaturated polyester resins curing at room temperatures in combination with a cobalt accelerator.

**Chemical structure**



**Typical properties**

Density at 20°C.....	1.065 g/ml	Flash point (setapoint).....	78°C
Refractive index at 20°C.....	1,4616	SADT (self-accelerating decomposition temp.)....	60°C
Viscosity at 20°C.....	31 mPas		

**Dosage**

Typical concentrations for Luperox® K1 run from 1 to 3 % by weight based on resin and for cobalt accelerator from 0,25% to 4% based on 1% metal content solution.  
 Luperox K1 is recommended for the curing of ortho- and isophthalic, Bisphenol-A or neopentyl-glycol resins at temperatures between 15 and 50°C.  
 A faster reaction and shorter demold times can be obtained by the addition of promoters such as dimethyl aniline or diethyl aceto acetamide to the cobalt accelerator.

**Applications**

- Applications of the Luperox® K1 are :
- hand lay-up
  - spray-up
  - centrifugal casting and filament winding
  - polyester concrete
  - gel coats.



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## Cure performance

The factors to be considered in selecting the optimum initiator / accelerator system are:

1. Process
2. Resin type
3. Required gel time or pot-life.
4. Part thickness
5. Room temperature
6. Nature and quantity of additives.
7. Dosage optimization between Luperox K1 and accelerator.

For comparison purposes, the table below shows activities of different methyl ethyl ketone peroxides.

Product	Gel time	Cure time	Peak Exothermic	Barcol hardness after 7 hours
Luperox® K1	15 minutes	34 minutes	110°C	48-50
Luperox® K12	36 minutes	61 minutes	99°C	47-51
Luperox® K10	12 minutes	26 minutes	124°C	47-50

Tests were carried out at 22°C in a medium activity resin following the DIN 16945 method with 2 % of MEKP and 0,5% of cobalt accelerator (1% metal content solution) in a test tube of 150 x 19 mm.

V1 – Oct 2006

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