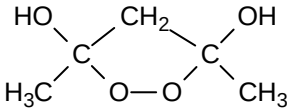
LUPEROX® K3



HOOH

ACETYL ACETONE PEROXIDE

CAS Nr.: 37187-22-7

EINECS: 253-384-9

APPLICATIONS

Luperox® K3 is an Acetyl Acetone Peroxide used for the cure of unsaturated polyester resins at room temperatures in combination with a cobalt accelerator.
At either room or elevated temperatures (40°C - 80°C), the Luperox® K3 allows much faster curing than others ketone peroxides.
Faster curing allows shorter cycle times and, as a consequence, higher productivity with any moulding technologies.
Luperox® K3 gel times are comparable to Luperox® K1.
At lower temperatures (<10°C) Luperox® K3 can be used with a promoter like dimethyl aniline, which constitutes an advantage in the production of polyester concrete parts and for repair works in open air.
Another advantage of Luperox® K3 is its pot-life of 20 to 30 hours compared to 8 to 12 hours with MEKP.

SPECIFICATIONS

	Units	Values	Method of Analysis
Physical form	-	Clear liquid	AM/I/71/A
Active oxygen	% w	4.0 - 4.4	AM/I/53/C
Colour	APHA	30 max	AM/I/5/A

CHARACTERISTICS

	Units	Values
Density at 20°C	g/ml	1,024
Viscosity at 20°C	mPa s	19
Refractive index at 20°C	-	1,4335
Flash point (setapoint)	°C	72
S.A.D.T (1)	°C	54

(1) Self-Accelerating Decomposition Temperature

DOSAGE

In spray-up and injection techniques, check carefully metering equipment: overdosing with Luperox® K3 can result in under polymerization. Therefore concentrations of Luperox® K3 must be strictly controlled between 0,75 and 2,5 %.
Luperox® K3 has to be used in resins containing cobalt accelerator.

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LUPEROX® K3

CURING PROPERTIES

Table 1: Comparison between Luperox® K3, Luperox® K1G (MEKP) and Luperox® Z11G (peroxide blend).

Product	gel time in minutes	cure time in minutes	Peak exothermic ℃	Residual styrene	
				after 24 hours at room temperature	after 8 h at 80℃
Luperox® K3	**12**	**17**	**165**	**2 %**	**0,2 %**
Luperox® K1G	13	31	120	5 %	0,1 %
Luperox® Z11G	12,5	22	150	3,5 %	0,2 %

Tests were carried out at 22°C with 2% of peroxide and 1% of cobalt accelerator (1% metal content solution) in a medium activity resin.

Table 2: Barcol hardness evolution as a function of time for different peroxides.

Time	Luperox® K3	Luperox® K1G	Luperox® Z11G
20 minutes	10	0	0
40 minutes	25	0	2-5
1 hour	30	0	15
2 hours	30-35	2-5	20
3 hours	35-40	5	25
4 hours	35-40	10	30-35
5 hours	35-40	10-15	35-40

Tests were carried out following the 934-1 method on a laminate of 2 mm thickness containing 30 % glass mat at 450 g/m2 and in a medium activity polyester resin accelerated with 1% of cobalt (1% metal content solution) and 2% of peroxide at 22°C.

STANDARD PACKAGING

25 kg drums and 4*5 kg.

SAFETY - HAZARD

Please consult the Safety Data Sheet before using the product.

STORAGE - HANDLING

Product can be stored minimum three months after receiving date, if kept in appropriate conditions and below its maximum storage temperature. Refer to the Safety Data Sheet for detailed storage instructions.

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