

## PEROXAN ME-50 L

### Chemical Name:

Methylethylketone peroxide in phtalate

### Application:

PEROXAN ME-50 L is utilized for curing of polymer concrete, lacquers based on unsaturated polyester resins and gelcoats as well as for final parts made from glassfiber reinforced polyester resins, which are produced by hand laminating, fiber spray or continuous processes.

PEROXAN ME-50 L is also suited for curing of Vinylester resins.

### Physical and chemical properties:

Appearance:	clear liquid
Peroxide content:	- %
Active oxygen content:	approx. 9,10 %
Molecular weight (active substance):	- g/mol
Density :	1,14 g/cm <sup>3</sup>
Bulk density:	- kg/m <sup>3</sup>
Storage Temperature:	max. 25 °C
SADT	approx. 60 °C
Stability of activity:	6 months

Exceeding the SADT (Self Accelerating Decomposition Temperature) is particularly dangerous because self accelerating decomposition may result. Therefore it must be ensured that the SADT can never be reached.

### Standard package:

25 kg Container

30 kg Container

Other types of packaging on request.

### Handling and storage:

For any information on

- first aid measures,
- fire fighting measures,
- accidental release measures,
- storage,
- handling,
- stability and reactivity,
- toxicological information,
- ecological information,
- disposal considerations,
- transport information,
- specific regulations

please refer to the safety data sheet.

Contact our product marketing and application department under +49 (2871) 99 02 13 for a current version of the safety data sheet.

## PEROXAN ME-50 L

### Application - curing of unsaturated polyester resins:

PEROXAN ME-50 L is very well suited for curing of unsaturated polyester resins at ambient temperatures as well as at slightly increased temperatures. It is strongly recommended to use PEROXAN ME-50 L in combination with a Cobalt accelerator (e.g. PERGAQUICK C 11)..

PEROXAN ME-50 L is not suited for hot curing processes.

The system PEROXAN ME-50 L / Cobalt accelerator does not influence the light stability of the final parts.

PEROXAN ME-50 L is utilized for curing of polymer concrete, lacquers based on unsaturated polyester resins and gelcoats as well as for final parts made from glassfiber reinforced polyester resins, which are produced by hand laminating, fiber spray or continuous processes.

The gel and curing times of the system PEROXAN ME-50 L / Cobalt accelerator can be varied in a broad range by variation of the accelerator dosage. The influence of the accelerator dosage can be obtained from table 1:

PERGAQUICK C 11 Dosage [% by wt.]	Gel Time [min.]	Demoulding Time [min.]
0,5	8	175
1,0	5	85
2,0	4	55

Table 1: Gel and demoulding times of a laminate (thickness = 2 mm), which is cured at ambient temperatures utilizing a dosage of 1 % by wt. of PEROXAN ME-50 L and different dosages of PERGAQUICK C 11.

After the curing reaction the degree of curing can be increased by a postcure process at temperatures ranging from + 80 °C to 100 °C and durations from 2 hours to 8 hours. It is common to detect the degree of curing by measuring the amount of residual Styrene. The influence of a postcure process on the amount of residual Styrene is shown in table 2:

Dosage of PEROXAN ME-50 L and PERGAQUICK C 11 [% by wt.]	2 0,5	2 1	2 2
Residual amount of Styrene [% by wt.] after 24 hours at ambient temperatures	7,8	7,2	6,9
after 40 hours at ambient temperatures	3,8	3,7	3,6
after 24 hours at ambient temperatures, plus 7 hours at + 80 °C	<0,2	<0,2	<0,2

Table 2: Residual amount of Styrene of a laminate (thickness = 2 mm).

Curing with the system PEROXAN ME-50 L / Cobalt accelerator should not be performed at temperatures below + 18 °C. At lower temperatures the performance of this system will drop strongly, resulting in an insufficient cure of the resin.

Humidity as well as several fillers and pigments may badly influence the curing performance of the system PEROXAN ME-50 L / Cobalt accelerator.

### Dosage:

As a general guide line the dosage relates to 100 % unsaturated polyester resin plus Styrene, but not including fillers or other additives:

PEROXAN ME-50 L: 1.0 % by wt. - 3.0 % by wt.

PERGAQUICK C 11: 0.3 % by wt. - 2.0 % by wt. (containing 1 % Cobalt)

The dosage may vary, depending on the required gel and demoulding time, the processing temperature, the thickness of the laminate and the activity of the polyester resin.

### Shelf life of the unsaturated polyester resin plus PEROXAN ME-50 L:

At ambient temperatures the shelf life of PEROXAN ME-50 L in the polyester resin is about several hours. However, the shelf life may vary with the peroxide dosage, the batch size, the activity of the polyester resin and the storage temperature. The shelf life can be increased by addition of an appropriate inhibitor.

The above mentioned guide lines do not cover all fields of application and processing of our product. If you need any additional information, please do not hesitate to contact our product marketing and application department (Phone: +49-2871-9902-13).

We consider the information given in this technical data sheet to be reliable. However it is not to be taken as a recommendation for use in violation of any patent and is given without any guarantee.