

Paraffin

Paraffin is a ready-to-use 10% solution of paraffin in styrene and xylene.
It is used for the tack-free curing of unsaturated polyester resins in the air.

Feature	Value	Regulation
Density at 20 °C	approx. 0.85 g/ml	DIN 53 217/2
Outlet viscosity at 20 °C in ISOBecher Ø 4 mm	9 - 11 s	EN ISO 2431
Flash point	+ 26 °C	DIN 53 213

Processing:

Resin preparations that are intended to harden in air are given a resin temperature of at least 20 °C, depending on the type of resin, add a certain amount (see table below) of the 10% solution. In the case of high filler additives, this amount may have to be increased depending on the type and proportion of fillers. The same applies to high proportions of flexible resins.

To ensure that the paraffin floats evenly over the entire surface during curing, different amounts of paraffin solution are added to each polyester brand. For glass fibre reinforced laminates without

Resin enrichments are often sufficient for smaller paraffin additions. The following information applies to hardening with cobalt accelerator; when amine accelerators are used, the effect of paraffin is not so good.

Resin Type: **Encore:**

Orthophthalic acid resins	2 - 3 %
Isophthalic acid resins	2 - 3 %
elastic resins	6 %
Vinylester-Harze	5 %
ISO/NPG-Harze	5 %

Paraffin solution

If the precipitating paraffin interferes for any reason, or if the resin temperature of at least 20 °C cannot be maintained until processing (at lower temperatures, the paraffin precipitates prematurely), spray the paraffin solution on the resin surface before or shortly after gelling.

Attention!

Paraffin must not be processed at temperatures above 28°C or in direct sunlight, as above this temperature the paraffin does not float out of the polyester resin. Stick-free curing is then not guaranteed.

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Note:

General Features

The curing of unsaturated polyester resins is hindered wherever the resin comes into contact with atmospheric oxygen (except for special coating resins, which are only suitable for the production of polyester resin mouldings in a few cases). If the hardening takes place quickly and at a higher temperature - for which the reaction heat can be sufficient for thicker parts - the influence of atmospheric oxygen is often hardly noticeable, while thinner, slowly hardening parts have a sticky surface. In no case, however, are optimal molding material properties achieved in the outermost resin layer, even if the surface appears to be adhesive-free after more or less long post-curing. Such parts can easily become dirty, erode, yellow, and become blotchy white when exposed to water.

Since it is not always possible to exclude air, e.g. by covering it with foils or by means of counter-moulding, the same goal can also be achieved by applying a paraffin layer to the polyester resin. The easiest way to do this is to add paraffins to the polyester resin. The paraffin precipitates during curing, creating a thin film on the surface, which protects the resin very effectively not only from air ingress, but also from excessive styrene evaporation.

Storage/Handling

The product must be sealed and stored away from sunlight at a temperature of at least 22 °C. At too high temperatures, the styrene polymerizes; if the temperatures are too low, the paraffin flocculates but can be brought back into solution by heating. Can be stored for at least 4 months in unopened original containers at temperatures of up to 25 °C.

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