

E45L

- Epoxy Laminating Resin System -



The Epoxy Laminating Resin System E45L is an unfilled, low-viscous combination of resin and hardener with middle working time (pot life).

Features & Benefits:

- Excellent wet-out of fibrous materials
- Cause clear, non-gluey surfaces
- Cold-hardening, demouldable at room-temperature
- Rest flexible
- Can be used as an impregnating and laminating resin system
- Binders for fibrous materials for moulding
- Creation of fine-fabric laminates
- Surface sealing

Physicochemical characteristics:

Processing data:	
Mix Ratio (by weight)	100 parts resin / 60 parts hardener
Mix Ratio (by volume)	100 parts resin / 66 parts hardener
Mix viscosity	Low viscous
Pot life (working time) 20°C	45 min (100 g)
Demouldable	48 h (20°C)
Full cure	7 d (20°C)
Working temperature (optimal)	18 °C – 25 °C

Physical data / raw condition:	Value	Unit	Test method
Viscosity (25°C) resin	700 - 1100	mPa * s	PM.01.003
Viscosity (25°C) hardener	290 - 450	mPa * s	PM.01.003

Physical Data / hardened condition:	Value	Unit	Test method
tensile strength	40 - 45	N/mm ²	PM.01.004
Elongation	3 - 4	%	PM.01.004
Flexural strength	70 – 80	N/mm ²	PM.01.005
E-Modulus	2,5 – 3	kN/mm ²	PM.01.005

Physical data determined on the unfilled specimen. Curing took place for 7d at 23 °C.
Tempering recommended (24h at 23 ° C / 15h at 60 ° C)

Safety instructions:

The safety instructions are to be taken from the respective containers. Do not allow children to handle. Prevent inhalation of the fumes and contact with bare skin. Wear suitable protective gloves and safety goggles. Do not eat, drink or smoke while using. During the hardening process, energy can be released in the form of heat, hence a cooling/heat exchanging should be provided in order to prevent hot spots. Only mix the components in the recommended proportions in accordance with the instructions.

Application instructions:

We recommend tests be performed for trials and suitability for the particular type of application. The system should only be used in the optimum temperature conditions. The relative air humidity should not be above 70%. In respect of the safety instructions the resin and hardener should be mixed in a suitable mixing vessel in accordance with characteristics given in the data sheet. Deviating from the mixing recommendations can lead to incomplete hardening and through that to a loss of performance. Ensure that the edges are well mixed using a stirring stick or a propeller type mixer. Localized signs of hardening indicate insufficient stirring and mixing of the components. Larger amounts (more than 100g) and higher temperatures (higher than 20°C) reduce the pot life. Mixtures which rise above 40 ° C in the mixing vessel should not be used any further since curing leads to property losses. Temperature increases are delayed by pouring the mixture into flat paint pans.

When using fabric layers, these are cut to size as required and placed in a suitably prepared, provided with release agents, negative mould or placed on a positive mould. After spreading the epoxy mixture over surface, saturate and de-aerate with suitable equipment. In order to achieve a homogenous bonding all layers will be laminated "wet on wet". The strength of the resulting mould depends on the number of layers. Improved heat resistance can be achieved by tempering, e.g. at 60°C for 15 hours.

Cleaning work tools:

Unhardened product remains can be removed from tools by means of acetone or Thinner XB. Tools should be given a good airing after being cleaned with these solvents, in order to prevent the solvent from being retained until the tool is used again.

Hardened remains can only be removed by mechanical means, e.g. by sanding.

Storage:

Threaded container tops should be kept free of material remains. Do not exchange tops/lids. Close opened containers tightly after use. Store in a cool dry place. With optimal storage conditions, shelf-life should be beyond 3 years.

Disposal:

Do not allow to enter drains, waterways or soil. Uncured product residues are hazardous waste. The cured system is construction site waste / household waste.

Further Information:

Further application information can be obtained from our website, by selecting Product Info on the homepage. Please do not hesitate to contact us by telephone if you have further queries.

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use and storage are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us. We recommend tests be performed for trials and suitability for the particular type of application.

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