

ALCHEMIX EP 4350

Two Part Epoxy Laminating Paste System

For use with GELCOAT EP 4060 and ALCHEMIX EP 4060C Coupling Coat

ALCHEMIX EP 4350 is a glass fibre reinforced epoxy laminating paste for use as a back filling compound in combination with GELCOAT EP 4060 and ALCHEMIX EP 4060C coupling coat. After mixing both components a very smooth consistency is achieved with good and easy to spread characteristics. ALCHEMIX EP 4350 is formulated for use in RIM tools, moulds for pre-pregs, foundry patterns, gauges, jigs and fixtures, copy models and large negatives, controlling stencils and applications requiring high heat resistance.

Special Features

- High heat distortion temperature
- Easy application on vertical surfaces
- Smooth consistency

Mix Ratio

EP 4350 : H4350
By Weight 100 : 8

Product Data

Property	Units	EP 4350	H4350	Mix
Material	-	Glass fibre filled epoxy resin	Formulated amine	Glass fibre filled epoxy
Appearance	-	Grey paste	Amber liquid	Grey paste
Viscosity (25°C)	mPa.s	Paste	10 – 20	Paste
Density (25°C)	gcm ⁻³	1.20 – 1.30	0.95 – 1.00	1.17 – 1.27
Usable Life (200g, 25°C)	Minutes	-	-	120
Demould Time (200g, 25°C)	Hours	-	-	24 may be longer in cold conditions

Cured Properties

Properties	Standard	Units	Result (160°C post cure)
Hardness	BS 2782: Part 3: Method 365B	Shore D	75 – 85
Linear Shrinkage	500 x 50 x 10 mm	%	< 0.05
Tensile Strength	BS 2782: Part 3: Method 320B	MPa	5.5 – 7.5
Elongation at Break	BS 2782: Part 3: Method 320B	%	2.0 – 3.0
Flexural Strength	BS 2782: Part 3: Method 335A	MPa	40.0 – 5.0
Flexural Modulus	BS 2782: Part 3: Method 335A	MPa	5200 – 5800
Coefficient of Thermal Expansion (CoTE)	TMA	°C ⁻¹	6 – 10 x 10 ⁻⁶
Heat Distortion Temperature (HDT)	TMA	°C	150 – 160 (After full post cure, see below)

Method of Use

Mixing and Application

ALCHEMIX EP 4350 should be mixed with HARDENER H4350 according to the indicated mix ratio. The two components should be thoroughly mixed by hand until uniform in consistency and then applied on top of ALCHEMIX EP 4060C coupling coat. Refer to the relevant data sheets for information on the use of GELCOAT EP 4060 and ALCHEMIX EP 4060C coupling coat. The laminating paste should be applied in even layers, not less than 12mm and not deeper than 25mm. Care should be taken to avoid forming any air gaps between the coupling coat and the laminating paste. Using a roller will ensure an even layer thickness of 12 – 25 mm, avoiding unnecessary exotherm and resulting in a stable structure. When handling ALCHEMIX EP 4350, protect your hands with rubber gloves. Refer to the product MSDS for more information.

Cure and Post Cure

To achieve full high temperature properties, a step wise post cure treatment is recommended. Allow the product to cure at room temperature for at least 24 hours, then heat to 40°C for 1 hour, followed by 60°C for 1 hour, followed by 80°C for 1 hour, followed by 100°C for 1 hour, followed by 120°C for 1 hour, followed by 140°C for 1 hour, followed by 160°C for 1 hour. Then allow the product to slowly return to room temperature. The product can be used without post cure or with partial post cure, but will not achieve full high temperature properties.

Storage

ALCHEMIX EP 4350 and HARDENER H4350 should be stored in original, unopened containers between 15 and 25°C. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, ALCHEMIX EP 4350 / H4350 will have a shelf life of 12 months, from the date of production.

Packaging

ALCHEMIX EP 4350 is supplied in 5kg and 20kg containers.
HARDENER H4350 is supplied in 400g and 1.6kg containers.

(Please contact Alchemie Ltd for bulk supply)

Further Information

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

Before using any of our products, users should familiarise themselves with the relevant Technical and MSDS provided by Alchemie Ltd.

Alchemie Limited

Alchemie Ltd develop, formulate and distribute Epoxy Resins, Polyurethane Resins, Silicones, Model Boards and Sheet Wax for use in the following applications:

- Electrical encapsulation
- Rapid Prototyping
- Prototypes
- Casting
- Gel Coating
- Laminating
- Model Making
- Master Models
- Flexible and rigid mould making

We offer fast service, technical support, development expertise, innovative products, diverse knowledge and experience.

We are a well-established company, with a high level of investment and experience. We implement BS EN ISO 9001.

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