

Technical Data Sheet



Cured Properties

Properties	Standard	Units	Result (Full 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 – 50.0
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 4062C coupling coat or a layer of ALCHEMIX EP 574 with chopped strand mat. Refer to the relevant data sheets for information on the use of GELCOAT EP 4062, ALCHEMIX EP 4062C coupling coat and ALCHEMIX EP 574 or contact Alchemie Ltd for more information.

The laminating paste should be applied in even layers, not less than 12mm and not deeper than 25mm thick. 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 3 hours.

To prevent any distortion during the post cure cycle, the unit should be placed on a conformer. When post-curing is complete, let the unit cool down slowly to room temperature, preferably in the oven. Sudden change in temperature can cause distortion or warping.

The product can be used without post cure or with partial post cure, but will not achieve full high temperature properties. The product can be post cured at higher temperatures (up to 160 °C), however, care should be taken if using the product at these temperatures as any air voids from the laminating process can cause bubbling or delamination between the layers.

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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