

ALCHEMIX[®] EP 519 / H50

Epoxy Laminating Resin
85 – 90 Shore D Hardness

ALCHEMIX EP 519 / H50 is a general purpose laminating resin for laminates requiring good flexural strength. The low viscosity of ALCHEMIX EP 519 / H50 allows excellent wetting of fibres, such as carbon fibre.

Mix Ratio

By Weight **EP 519: H50**
 100 : 50

Product Data

Property	Units	EP 519	H50	Mix
Material	-	Epoxy resin	Formulated amine	Epoxy
Appearance	-	Clear Liquid	Amber liquid	Clear Liquid
Viscosity (25°C)	mPa.s	11000 – 14000	100 – 200	900 – 1300
Density (25°C)	g/cm ³	1.10 – 1.18	0.95 – 1.00	1.04 – 1.12
Pot Life (200g, 25°C)	Minutes	-	-	30 – 50
Demould Time (4mm, 25°C)	Hours	-	-	8 – 14

Technical Data Sheet



Cured Properties

Properties	Standard	Units	Result (Full Cure)
Hardness	BS 2782: Part 3: Method 365B	Shore D	85 – 90
Linear Shrinkage	500 x 50 x 10 mm	%	0.50
Tensile Strength	BS 2782: Part 3: Method 320B	MPa	35.0 – 40.0
Elongation at break	BS 2782: Part 3: Method 320B	%	7.0 – 9.0
Flexural Strength	BS 2782: Part 3: Method 335A	MPa	56.0 – 62.0
Flexural Modulus	BS 2782: Part 3: Method 335A	MPa	1000 – 1500
Heat Distortion Temperature (HDT)	TMA	°C	76 – 80

Above values refer to pure resin, properties of the laminate will differ and will depend on the reinforcements used.

Method of Use

Preparation

Before use ensure that the resin, fibre or filler and Gelcoat are compatible. For advice on the choice of Gelcoat and for processing instructions, please contact Alchemie Ltd.

Mixing Instructions

Thoroughly mix the resin and the hardener according to the indicated mixing ratio, avoiding air entrapment and make certain that the material at the bottom and sides of the container is well stirred into the centre. The mixed material should be laminated within the stated pot life.

Curing and Post Curing

To achieve full high temperature properties, post cure treatment is recommended. After curing / demoulding the part should be heated to 80°C for 3 hours and then allowed to slowly return to room temperature. The product can be used without post cure or with partial post cure, but will not achieve full physical properties.

Storage

ALCHEMIX EP 519 and HARDENER H50 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 519 and HARDENER H50 will have a shelf life of 12 months, from the date of production.

Packaging

ALCHEMIX EP 519 is supplied in 5kg, 20kg and 200kg containers.
HARDENER H50 is supplied in 2.5kg, 10kg and 25kg containers.

(Please contact Alchemie Ltd for bulk supply)

Further Information

All data listed relates to typical values. This data should not be considered a product specification.

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 develops, 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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