

## ALCHEMIX<sup>®</sup> EP 522

*Epoxy Resin System for Resin Infusion  
80 – 85 Shore D Hardness*

ALCHEMIX EP 522 is a ultra low viscosity epoxy resin system, specifically designed for vacuum bagging and resin infusion applications. The ultra low viscosity produces excellent wetting of fibre reinforcements such as glass, carbon or aramid fibre.

### Mix Ratio

By Weight                      **EP 522: H522**  
    100 : 22

### Product Data

Property	Units	EP 522	H522	Mix
Material	-	Epoxy resin	Formulated amine	Epoxy
Appearance	-	Clear Liquid	Amber liquid	Clear Liquid
Viscosity (25 °C)	mPa.s	300 – 500	50 – 100	200 – 400
Density (25 °C)	g/cm <sup>3</sup>	1.13 – 1.18	0.92 – 0.97	1.10 – 1.14
Pot Life (200g, 25 °C)	Minutes	-	-	45 – 55
Demould Time (25 °C)	Hours	-	-	18 – 24

# Technical Data Sheet



## Cured Properties

Properties	Standard	Units	Result (Full Cure)
Hardness	BS 2782: Part 3: Method 365B	Shore D	80 – 85
Tensile Strength	BS 2782: Part 3: Method 320B	MPa	43 – 53
Elongation at break	BS 2782: Part 3: Method 320B	%	3.5 – 5.0
Flexural Strength	BS 2782: Part 3: Method 335A	MPa	116 – 122
Flexural Modulus	BS 2782: Part 3: Method 335A	MPa	2500 – 3000
Heat Distortion Temperature (HDT)	TMA	°C	104 – 108

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 is compatible with the fibre or filler being used.

### **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 used within the stated pot life.

### **Processing**

ALCHEMIX EP 522 is formulated for resin infusion applications. For advice on processing instructions, please contact Alchemie Ltd.

### **Curing and Post Curing**

To achieve full high temperature properties, post cure treatment is recommended. Allow the product to cure at room temperature for at least 24 hours and then heat to 60°C for 1 hour, followed by 100°C for 1 hour, followed by 120°C for 5 hours. 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 physical properties.

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## **Storage**

ALCHEMIX EP 522 and HARDENER H522 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 522 and HARDENER H522 will have a shelf life of 12 months, from the date of production.

## **Packaging**

ALCHEMIX EP 522 is supplied in 1kg, 5kg, 25kg and 200kg containers.  
HARDENER H522 is supplied in 220g, 1.1kg, 5.5kg 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.

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## 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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