

Technical Data Sheet

ALCHEMIX® EP 575

*High Temperature Epoxy Laminating Resin System
87 – 92 Shore D Hardness*

ALCHEMIX EP 575 is a two part, ambient temperature cure, epoxy system; exhibiting outstanding chemical resistance and mechanical properties. This system has low mixed viscosity and when cured shows excellent high temperature and physical properties. This system has excellent wetting properties for various fibre systems including glass fibre, aramid fibre and carbon fibre etc. The system is suitable for a variety of applications including hand lay up and RTM and is ideally suited for the repair of motorcycle fuel tanks.

Special Features

- Excellent chemical resistance
- Excellent wetting and impregnation of fibres
- Excellent high temperature properties
- High dimensional stability

Mix Ratio

EP 575 : H575
By Weight 100 : 25

Product Data

Property	Units	EP 575	H575	Mix
Material	-	Epoxy Resin	Formulated Amine	-
Appearance	-	Straw coloured liquid	Straw coloured liquid	Straw coloured liquid
Viscosity (25°C)	mPa.s	5000 – 11000	60 – 120	2000 – 3000
Density (25°C)	g/cm ³	1.15 – 1.20	0.94 – 0.99	1.10 – 1.15
Pot life (200g, 25°C)	Hours	-	-	40 – 70
Cure Time (200g, 25°C)	Hours	-	-	16 – 24
Full Cure (25°C)	Days	-	-	7

Technical Data Sheet

Cured Properties

Properties	Standard	Units	Result (Full Cure)
Hardness	BS EN ISO 868	Shore D	87 – 92
Tensile Strength	BS EN ISO 527	MPa	31.0 – 36.0
Elongation at Break	BS EN ISO 527	%	1.5 – 2.5
Tensile Modulus	BS EN ISO 527	MPa	1000 – 1200
Flexural Strength	BS EN ISO 178	MPa	80 – 100
Flexural Modulus	BS EN ISO 178	MPa	2100 – 2400
Heat Distortion Temperature (HDT)	TMA	°C	108 – 112
Glass Transition Temperature	DMA	°C	125 – 130

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. If using a gelcoat, we recommend EP 4062. Please read the relevant technical datasheet before use.

Mixing and Application

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 two components should be mixed and applied within the pot life of the mixture.

ALCHEMIX EP 575 can be used with a variety of reinforcements, such as glass, carbon or aramid. Woven cloth or chopped fibres can be used.

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

Technical Data Sheet

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 2 hours, followed by 160°C for 2 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 high temperature properties.

Storage

ALCHEMIX EP 575 and HARDENER H575 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 575 / H575 will have a shelf life of 12 months, from the date of production.

Packaging

EP 575 is supplied in 1kg, 5kg, 25kg or 200kg containers
H575 is supplied in 250g, 1.25kg and 6.25kg 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.

Technical Data Sheet

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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