

ALCHEMIX® EP 574 / H574

*High Temperature Epoxy Laminating Resin System
85 – 88 Shore D Hardness*

ALCHEMIX EP 574 / H574 is a two part, ambient temperature cure, epoxy system; exhibiting outstanding mechanical and thermal 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.

Special Features

- Low viscosity
- Excellent wetting of fibres
- Excellent high temperature properties

Mix Ratio

EP 574 : H574
By Weight 100 : 35

Product Data

Property	Units	EP 574	H574	Mix
Material	-	Epoxy Resin	Formulated Amine	-
Appearance	-	Clear Liquid	Clear Liquid	Clear Liquid
Viscosity (25 °C)	mPa.s	1000 – 1500	55 – 75	450 – 650
Density (25 °C)	g/cm ³	1.10 – 1.20	0.93 – 0.98	1.05 – 1.15
Pot life (200g, 25 °C)	Hours	-	-	5 – 6
Cure Time (200g, 25 °C)	Hours	-	-	24
Full Cure (25 °C)	Days	-	-	7

Cured Properties

Properties	Standard	Units	Result (Full Post Cure)
Hardness	BS 2782: Part 3: Method 365B	Shore D	85 – 88
Density	BS 2782: Part3: Method 620	g/cm ³	1.10
Tensile Strength	BS 2782: Part 3: Method 320B	MPa	20.0 – 25.0
Elongation at break	BS 2782: Part 3: Method 320B	%	1.0 – 2.0
Flexural Strength	BS 2782: Part 3: Method 335A	MPa	62.0 – 67.0
Flexural Modulus	BS 2782: Part 3: Method 335A	MPa	2600 – 3000
Heat Distortion Temperature (HDT)	TMA	°C	170 °C

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 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.

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 2 hours, followed by 160 °C for 2 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.

Storage

ALCHEMIX EP 574 and HARDENER H574 should be stored in original, unopened containers between 15 and 25°C.

If stored under the above conditions, ALCHEMIX EP 574 / H574 will have a shelf life of 12 months, from the date of production.

Packaging

EP 574 is supplied in 1kg, 5kg, 25kg or 200kg containers
H574 is supplied in 1kg, 5kg and 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.

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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