Technical Data Sheet

ALCHEMIX® EP 5753 – H97

Epoxy Resin for Heavy Duty Corrosion Resistant Applications
Suitable for Coating or Laminating Applications

ALCHEMIX EP 5753 – H97 is an ambient temperature cure epoxy system exhibiting outstanding corrosion resistance and excellent adhesion in difficult conditions. ALCHEMIX EP 5753 – H97 is formulated for use as a coating or laminating resin for demanding applications requiring heavy duty corrosion resistance. ALCHEMIX EP 5753 – H97 has a long pot life, allowing large areas to be covered or for the product to be used in warm conditions. The system is formulated to produce high performance composite parts using a wide variety of fibre systems, including carbon fibre, glass fibre and aramid fibre. The system has been formulated to ensure efficient wetting of fibres, eliminating air entrapment, dry spots and porosity in the composite part.

Special Features

- Excellent corrosion resistance
- Excellent chemical resistance
- Excellent adhesion
- Long working time
- Excellent fibre wetting

Mix Ratio

	EP 5753 :	**H97**
By Weight	100 :	64

Product Data

Property	**Units**	**EP 5753**	**H97**	**Mix**
Material	-	Epoxy Resin	Formulated Amine	-
Appearance	-	Pale Liquid	Amber Liquid	Amber Liquid
Viscosity (25℃)	mPa.s	400 – 700	800 – 1100	500 – 800
Density (25℃)	g/cm^3	1.13 – 1.18	0.99 – 1.03	1.07 – 1.12

Working Time and Cure Speed

Property	Units	Typical Value
Pot life (200g, 25℃)	Minutes	30 – 60
Cure Time (200g, 25℃)	Hours	24
Full Cure (25℃)	Days	7
Minimum Curing Temperature	℃	15

Cured Properties

Properties	Standard	Units	Typical Value (Full Cure)
Hardness	BS EN ISO 868	Shore D	78 – 82
Tensile Strength	BS EN ISO 527	MPa	50.0 – 54.0
Elongation at Break	BS EN ISO 527	%	4.0 – 6.0
Tensile Modulus	BS EN ISO 527	MPa	1400 – 1700
Flexural Strength	BS EN ISO 178	MPa	68.0 – 72.0
Flexural Modulus	BS EN ISO 178	MPa	1600 – 2000
Glass Transition Temperature (Tg)	DMA	℃	57 – 61

Method of Use

Preparation

Before use ensure that the resin, fibre or filler and gelcoat (if applicable) are compatible. For advice on the choice of gelcoat or suitable tooling systems, please contact Alchemie Ltd.

If applying as a coating, ensure that the surface to be coated has been properly prepared. The surface should be clean; all dust, oil, grease and other contaminants should be removed. Abrading the surface will aid adhesion and ensure that no contamination is present. The system performs well in wet or

humid conditions, but care should be taken to remove excessive surface water. Do not apply resin if the ambient or substrate temperature is less than 15°C.

Mixing and Application

Thoroughly mix the resin and the hardener according to the indicated mixing ratio, avoid air entrapment and ensure 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.

Cure and Post Cure

The system is intended to be cured at room temperature, a post cure is not necessary. The product should be usable after 24 hours, but full cure can take up to 7 days. Lower ambient temperatures will result in slower cure. The product should always be processed and cured at temperatures above the minimum curing temperature of 15°C.

Storage

ALCHEMIX EP 5753 and HARDENER H97 should be stored in original, unopened containers between 15 and 25°C.

If stored under the above conditions, ALCHEMIX EP 5753 and HARDENER H97 will have a shelf life of 12 months, from the date of production.

Packaging

EP 5753 is supplied in 1kg, 5kg, 25kg and 200kg containers
H97 is supplied in 640g, 3.2kg, 16kg and 200kg 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.