

# Technical Data Sheet

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## ALCHEMIX<sup>®</sup> EP 4387W

*Two Part, Pigmentable, Kneadable, Epoxy Putty  
70 – 80 Shore D Hardness*

ALCHEMIX EP 4387W is a readily pigmentable, two component epoxy putty formulated for applications such as: repair, maintenance, construction, model making and pattern making. ALCHEMIX EP 4387W is easily mixed and applied by hand and ALCHEMIX EP 4387W will bond to most substrates (metals, most plastics, rubber, ceramics, concrete, brick, wood etc) and cures at room temperature to give a tough and durable material. Once cured, the material can be machined, drilled, tapped, turned, filed, sawn, sandpapered or painted.

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### **Special Features**

- Excellent adhesion to a variety of substrates
- Easily pigmented
- Fine texture, easy to mix
- Easy to apply

### **Applications**

- Sealing of pipes and tanks
- Anchoring of screws and hooks
- Repairing and building-up of castings
- Repairing of shafts, bearings, pumps and casings
- Reconditioning of defective threads
- Making of patterns and models for trial series
- Repairing of aluminium, light metal and diecast parts
- Model and jewellery making

### **Mix Ratio**

	<b>EP 4387W</b>	<b>:</b>	<b>H4387W</b>
<b>By Weight</b>	100	<b>:</b>	100
<b>By Volume</b>	100	<b>:</b>	100

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## Product Data

Property	Units	EP 4387W	H4387W
Material	-	Mineral filled epoxy resin	Mineral filled hardener
Appearance	-	White putty	White putty
Density (25°C)	g/cm <sup>3</sup>	1.65 – 1.75	1.65 – 1.75
Workable Time (200g, 25°C)	Minutes	-	50 – 60
Full Cure (200g, 25°C)	Hours	-	24

## Cured Properties

Properties	Conditions	Standard	Units	Result
Hardness	7 day cure at room temperature	BS EN ISO 868	Shore D	70 – 80
Glass Transition Temperature (T <sub>g</sub> )	Post cured to 100°C	DMA	°C	69 – 73
Glass Transition Temperature (T <sub>g</sub> )	7 day cure at room temperature	DMA	°C	47 – 51

## Method of Use

ALCHEMIX EP 4387W should be mixed at a ratio of 100 : 100 by weight or volume. The two components should be mixed by hand until of uniform colour. Insufficient mixing will result in reduced final properties or incomplete cure.

## Pigmenting

When used as delivered ALCHEMIX EP 4387W yields a good white material, however, if other colours are desired then this can be easily achieved by blending in suitable pigments using the following process.

- Load ALCHEMIX EP 4387W into a suitably strong mixing vessel (planetary and Z-blade mixers are ideal)
- Add epoxy pigment paste and A802 and mix until a smooth consistent colour is achieved.

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Pigment levels depend upon the desired colour strength but should not exceed 3%, the A802 level should be half of this amount, e.g. 1kg ALCHEMIX EP 4387W, 20g EP 962 (Red Pigment) and 10g A802. This coloured material should then be used in the same manner as the pure white material.

## **Elevated Temperature Properties**

If cured at room temperature, the product will have a Glass Transition Temperature (Tg) of 47 – 51°C. If post cured for 3 hours at 80°C, the Tg can be increased to 69 – 73°C. A small amount of oil may leach from the cured product at elevated temperatures.

## **Storage**

ALCHEMIX EP 4387W and HARDENER H4387W should be stored in original, unopened containers between 15 and 25°C.

If stored under the above conditions, ALCHEMIX EP 4387W / H4387W will have a shelf life of 12 months, from the date of production.

## **Packaging**

Please contact Alchemie Ltd

## **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 familiarize themselves with the relevant Technical and MSDS provided by Alchemie Ltd.

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## Alchemie Limited

Alchemie Ltd develop, 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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