

Technical Data Sheet

ALCHEMIX® EP 519 – H3 / H7 / H8

Epoxy Resin System
85 – 90 Shore D Hardness

ALCHEMIX EP 519 with HARDENER H3, H7 or H8 is a cold-curing, two part, unfilled epoxy resin system. It is formulated for use in backfilling compositions using mineral or metallic fillers and for laminates requiring good flexural strength. It has excellent adhesion to metallic and insulating materials. It can also be used for applications such as coating of insulating tapes and locking of screws etc.

Mix Ratio

	EP 519 : H3	H7	H8
By Weight	100 : 22		
	100 :	25	
	100 :		25

Product Data

Property	Units	EP 519	H3	H7	H8
Material	-	Epoxy resin	Formulated amine	Formulated amine	Formulated amine
Appearance	-	Clear liquid	Straw colour liquid	Straw colour liquid	Straw colour liquid
Viscosity (25 °C)	mPa.s	10000 – 14000	150 – 250	60 – 100	45 – 65
Density (25 °C)	g/cm ³	1.10 – 1.18	0.98 – 1.03	0.93 – 0.98	0.91 – 0.96
Mixed Viscosity (25 °C)			2000 – 3000	2000 – 2600	1500 – 2100
Mixed Density (25 °C)			1.08 – 1.14	1.05 – 1.10	1.05 – 1.10
Pot Life (200g, 25 °C)	Mins	-	30 – 40	45 – 65	100 – 150
Cure Time (25 °C)	Hours	-	8 – 14	18 – 24	18 – 24
(50 °C)				06 – 08	06 – 08
(80 °C)				01 – 02	01 – 02
(100 °C)				0.5 – 01	0.5 – 01

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Cured Properties

Properties	Standard	Units	H3 (Post Cured)	H7 / H8 (Post Cured)
Hardness	BS EN ISO 868	Shore D	85 – 90	85 – 90
Linear Shrinkage	500 x 50 x 10 mm	%	< 0.20	< 0.20
Tensile Strength	BS EN ISO 527	MPa	45 – 55	50 – 60
Elongation at Break	BS EN ISO 527	%	5 – 6	5 – 8
Flexural Strength	BS EN ISO 178	MPa	95 – 105	70 – 80
Flexural Modulus	BS EN ISO 178	MPa	1800 – 2200	2000 – 2500
Heat Deflection Temperature (HDT)	TMA	°C	60 – 65	80 – 90

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. For advice on the choice of Gelcoat and for processing instructions, please contact Alchemie Ltd.

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. Please note that the pot life is mentioned for 200g test sample mixing larger quantities will shorten the pot life similarly smaller quantities will increase the pot life.

Curing and Post Curing

To achieve full high temperature properties, post cure treatment is recommended. After curing / demoulding the part should be heated to 80°C for 3 hours and then allowed 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 519, HARDENER H3, HARDENER H7 and HARDENER H8 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 519, HARDENER H3, HARDENER H7 and HARDENER H8 will have a shelf life of 12 months, from the date of production.

Packaging

ALCHEMIX EP 519 is supplied in 5kg, 20kg and 200kg containers.
HARDENER H3 is supplied in 1kg, 5kg, 12.5kg and 25kg containers.
HARDENER H7 is supplied in 1kg, 5kg and 25kg containers.
HARDENER H8 is supplied in 1kg, 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.

Alchemie® and Alchemix® are registered Trademarks of Alchemie Ltd, Warwick Road, Kineton, Warwick, England, CV35 0HU, England, United Kingdom. Ph: +44 (0)1926 641600; FAX: +44 (0)1926 641698