

DIY RC78 Rapid Cure Epoxy Resin System

Fast curing epoxy resin system

DIY RC78 is an extremely fast curing 2 part epoxy resin system with very low viscosity. It is an unfilled epoxy resin system with excellent ambient cure ability. The system is comprised of RC78 (Resin) and a choice of H78F (Fast hardner) or H78SF (Super-fast hardner). The low viscosity resin produces excellent wetting of fibres. The rapid de-mould time makes this product ideally suited for track side / event side repairs.

Mix Ratio

RC78 : H78F / H78SF

By Weight 100 : 33

Product Data

Property	Units	RC78	H78SF	H78F
Material	-	Epoxy resin	Formulated amine	Formulated amine
Appearance	-	Clear liquid	Amber liquid	Straw colour liquid
Viscosity (25°C)	mPa.s	900 – 1300	90 – 130	120 – 160
Density (25°C)	g/cm ³	1.16 – 1.21	0.96 – 1.01	0.94 – 0.99
Mixed Viscosity (25°C)	mPa.s	-	400 – 800	800 – 1200
Mixed Density (25°C)	g/cm ³	-	1.09 – 1.14	1.09 – 1.14
Pot Life (200g, 25°C)	Minutes	-	7 – 9	10 – 13
Cure Time	Hours	-	0.5 – 1	1 – 2

Cured Properties

Properties	Standard	Units	RC78 / H78SF	RC78/ H78F
Hardness	BS EN ISO 868	Shore D	85 – 90	85 – 90
Linear Shrinkage	500 x 50 x 10 mm	%	< 0.2%	< 0.2%
Tensile Strength	BS EN ISO 527	MPa	40 – 46	48 – 54
Tensile Modulus	BS EN ISO 527	MPa	1600 – 2000	1600 – 2000
Elongation at Break	BS EN ISO 527	%	2.0 – 4.0	3.0 – 5.0
Flexural Strength	BS EN ISO 178	MPa	95 – 105	85 – 95
Flexural Modulus	BS EN ISO 178	MPa	2300 – 2700	2100 – 2400
Glass Transition Temperature (T _g)	DMA	°C	80 – 84	78 – 82

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 DIY Composites.

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 / de-moulding 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.

Storage

The DIY RC78 Resin system (RC78 & H78F / H78SF) 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, DIY RC78 Resin system (RC78 & H78F / H78SF) will have a shelf life of 12 months, from the date of production.

Packaging

DIY RC78 resin system is supplied in pack sizes of 0.5kg / 1kg / 5kg / 33.25kg

Further Information

All information presented within this document is believed to be accurate and reliable, but is solely for the user's consideration, investigation and verification. Our technical advice, whether verbal, or in writing is given in good faith, but without warranty express or implied—this also applies where proprietary rights of third parties are involved.

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info@diycomposites.co.uk

diycomposites.co.uk

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Unit B3 Roundhouse Close, Peterborough, PE1 5TA

the user to determine the suitability of any of the products mentioned for the user's specific application.

DIY Composites requests that the user reads, understands with the information contained herein and the current Material Safety Data Sheet.

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DIY Composites LTD markets and sells composite materials online and from its premises for the end user.

For any enquiries please contact DIY Composites by email at info@diycomposites.co.uk