Technical Data Sheet

EP 5752

Medium Viscosity Epoxy Laminating Resin

Variable Cure Speed System

EP 5752 is an ambient temperature cure epoxy system, exhibiting outstanding mechanical and thermal properties. 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 fibre wetting
- Variable cure speed using different hardeners
- Excellent mechanical properties
- High temperature resistance

Mix Ratio

	H5752	***H5752S***
By Weight	100 : 25	100 : 25

Product Data

Property	***Units***	***EP 5752***	***H5752***	***H5752S***
Description	-	Wet Lay Up Resin	Standard Hardener	Slow Cure Hardener
Material	-	Epoxy Resin	Formulated Amine	Formulated Amine
Appearance	-	Pale Liquid	Pale Amber Liquid	Pale Amber Liquid
Viscosity (25°C)	mPa.s	1300 – 1800	20 – 40	20 – 40
Density (25°C)	g/cm3	1.12 – 1.17	0.93 – 0.98	0.95 – 1.00
Mixed Viscosity (25°C)	mPa.s	-	300 – 500	300 – 500
Mixed Density (25°C)	g/cm3	-	1.08 – 1.13	1.08 – 1.13

Working Time and Cure Speed

Property	***Units***	***EP 5752 – H5752***	***EP 5752 – H5752S***
Pot Life (200g, 25°C)	Minutes	50 – 70	90 – 150
Cure Time (25°C)	Hours Days	16 – 24 7	24 7
Full Cure (25°C)	°C	18	18
Minimum Curing Temperature			

Cured Properties (Post Cured)

Properties	***Standard***	***Units***	***EP 5752 – H5752***	***EP 5752 – H5752S***
Hardness	BS EN ISO 868	Shore D	83 – 87	83 – 87
Tensile Strength	BS EN ISO 527	MPa	55.0 – 59.0	47.0 – 51.0
Elongation at Break		%	3.0 – 5.0	3.0 – 5.0
Tensile Modulus	BS EN ISO 527	MPa	1600 – 1900	1650 – 1950
Flexural Strength	BS EN ISO 527	MPa	111 – 117	97 – 103
Flexural Modulus	BS EN ISO 178	MPa	2400 – 2800	2300 – 2700
Glass Transition Temperature (Tg)	BS EN ISO 178	°C	105 – 110	88 – 93
	DMA			

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, please contact Alchemie Ltd. Do not apply resin if the ambient or substrate temperature is less than minimum curing temperature, see "***Working Time and Cure Speed***" section.

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. For advice on processing please contact Alchemie Ltd. ***Cure and Post Cure*** Lower ambient temperatures will result in slower cure. The product should always be processed and cured at temperatures above the minimum curing temperature, see "***Working Time and Cure Speed***" section. The system can be used after curing at room temperature, but in order 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 60°C for 1 hour, followed by 80°C for 1 hour, followed by 100°C for 3 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.

Storage EP 5752 and HARDENERS H5752 and H5752S should be stored in original, unopened containers between 15 and 25°C. Ifstored under the above conditions, EP 5752 and HARDENERS H5752 and H5752S will have a shelf life of 12 months, from the date of production.

Packaging EP 5752 is supplied in 1kg, 5kg, 25kg, and 200kg containers H5752 and H5752S are supplied in 250g, 1.25kg, 6.25kg, and 200kg containers.

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