

ADHESIVES

techniglue R85

TOUGHENED HEAT RESISTANT EPOXY ADHESIVE

TECHNIGLUE R85 is a solvent-free, toughened epoxy paste specifically formulated for use with H85 hardener to cure at room temperature and produce a high-strength, structural adhesive with high thermal performance.

Suitable for industrial bonding in applications that are subject to elevated temperatures, R85 exhibits excellent sag resistance and can be used for a wide variety of substrates including metals and ceramics, with correct surface preparation.

MIX RATIO

Resin/Hardener

100 parts R85 resin 40 parts H85 hardener by weight.

100 parts R85 resin to 50 parts H85 hardener by volume.

Take care to ensure that the components are thoroughly mixed to a uniform colour before applying.

Note: Care should be taken when dispensing and mixing. Do not attempt to control the cure time by altering the hardener ratio. Contact ATL Composites for specific information.

UNCURED PROPERTIES		
	R85	H85
Physical State	Beige Thixotropic Paste	Amber Thixotropic Paste
Specific Gravity	g/ml@ 25°C	1.44
		1.17

CURED CHARACTERISTICS		
		H85
Pot Life	@ 25°C - 100g (in Air)	36 Minutes
Cured to a Solid State	@ 25°C	9 Hours 30 Minutes
Mix viscosity mPas*	@ 25°C	Thixotropic
Shore D Hardness	@ 1 day @ 25°C	76
	@ 1 weeks @ 25°C	80
	+ 16 hours @ 40°C	84
	+ 2 hours @ 150°C	86
T _g , by DSC	After 1 day @ 25°C	47°C
		59°C
	+ 16 hours @ 40°C	64°C
	+ 2 hours @ 150°C	111°C
T _g Onset by DSC	+ 2 hours @ 150°C	98°C
Peak Tan Delta by DMA	+ 2 hours @ 150°C	120°C
Heat Distortion Temperature**	+ 2 hours @ 150°C	105°C

*Measured by Brookfield CAP2000+ Viscometer Cone 6 / 5rpm / 25°C / 30sec

** ASTM D648 Deflection Temperature Under Load Measured by DMA

APPLICATION

All surfaces should be clean and free from grease and/or loose particles. For best results and high strength bonds to occur, the adhesive must be capable of wetting both surfaces, this is best achieved by a uniformly, finely roughened (matt) finish.

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CURED PROPERTIES		CURED PROPERTIES AT ELEVATED TEMPERATURE	
Aluminium Substrate*	Lap Shear Strength (MPa)	Aluminium	Lap Shear Strength (MPa)
@ 1 weeks @ 25°C	12.2	Test Temperatures 25°C	12.2
+ 16 hours @ 40°C	14.0	80°C	14.0
		110°C	
		140°C	95 MPa

CURED PROPERTIES		
Tensile Strength	ASTM D638-97	46.2 MPa
Tensile Elongation at Break	ASTM D638-97	3.77%
Tensile Modulus	ASTM D638-97	11867 MPa
Flexural Strength	ASTM 790-03	76.3 MPa
Flexural Modulus	ASTM 790-03	3692 MPa
Compressive Strength	ASTM 695-96	67.7 MPa
Compressive Modulus	ASTM 695-96	20 MPa

PACK SIZES				
Order Code		Order Code		PACK
RESIN		HARDENER		
RB85	500 ml	HB85	250 ml	750 ml
RC85	1 L	HC85	500 ml	1.5 L
RD85	4 L	HD85	2 L	6 L

STORAGE

TECHNIGLUE R85 resin and H85 hardeners will keep for two years if kept in original containers at room temperature (15°C to 32°C) and out of direct sunlight. Containers should be tightly sealed to prevent moisture absorption.

HEALTH AND SAFETY

TECHNIGLUE R85 resin and H85 hardener have moderate sensitising potential, and should be kept out of the eyes and off the skin.

- Use with good ventilation and adequate safety equipment including impervious gloves and safety glasses.
- If skin contact occurs, remove contaminated clothing immediately, and wash the affected area thoroughly with water, avoiding the use of solvents except in the case of massive contamination.
- If eye contact occurs, immediately flush with running water for at least 15 (fifteen) minutes and seek medical advice.
- If swallowed:

Resins - DO NOT induce vomiting, and contact a doctor or the Poisons Information Centre.

Hardeners - DO NOT induce vomiting, give plenty of milk or water and contact a doctor or the Poisons Information Centre.

NOTE: Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty or merchantability or fitness, nor is protection from law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special or consequential damages.