

ADHESIVES

TOUGHENED EPOXY ADHESIVE

techniglue® R15

TECHNIGLUE R15 is a soft, thixotropic, solvent-free, epoxy paste, specifically formulated for use with H15 hardeners to cure at room temperature and produce a high strength structural adhesive for bonding of metals, particularly aluminium and steel.

R15 has been formulated to overcome the problem of peeling failure at the metal-resin interface, by increasing the peel strength of the bond, with negligible reduction in other adhesive properties.

Techniglue R15 and R15EXPT offers high chemical resistance, high compressive & tensile strengths, and also have excellent adhesion to all normal substrates. When working in high temperatures, or on larger projects, H15 Slow, and H15 Super Slow combined with R15EXPT, provide extended pot life and working times compared to the standard R15 / H15 combination.

MIX RATIO

1 part hardener to 1 part resin by weight or 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

	R15	R15EXPT	H15	H15 SLOW	H15 SUPER SLOW
Physical State	White Thixotropic Paste	White Thixotropic Paste	Beige Thixotropic Gel	Beige Thixotropic Gel	Beige Thixotropic Gel
Specific Gravity g/ml@ 25°C	1.18	1.18	1.18	1.18	1.20

CURED PROPERTIES

		R15/H15	R15/H15 Slow	R15EXPT/H15 Super Slow
Pot Life	@ 25°C - 100g (in Air)	35 minutes	83 minutes	180 minutes
Cured to a Solid State	@ 25°C	4 hours	8 hours	16 hours
Working Cure		10 hours	24 hours	48 hours
Shore D Hardness	@ 1 day	75	64	56
	@ 2 weeks ambient	74	72	70
Tg	24 hours @ 25°C	49°C	39°C	29°C
	2 weeks @ 25°C	61°C	50°C	51°C
	+ 16 hours @ 50°C	75°C	58°C	59°C
	+ 8 hours @ 60°C	75°C	60°C	65°C

MECHANICAL PROPERTIES

Aluminium Substrate	Ultimate Tensile Stress (MPa)
R15 / H15	22.3
R15 / H15 Slow	22.4
R15EXPT / H15 Super Slow	20.7

Note: (i) All tests are conducted based on ASTM D1002 (Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)). All specimens are degreased and abraded. (ii) All specimens are cured for 24h@ambient + 16h@40°C prior of testing.

ADHESIVES

TOUGHENED EPOXY ADHESIVE

techniglue® R15

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.

PACK SIZES				
Order Code		Order Code		PACK
RESIN		HARDENER		
RA15	500 ml	HA15	500 ml	1 L
RB15	1 L	HB15	1 L	2 L
RC15	4 L	HC15	4 L	8 L
RD15	20 L	HD15	20 L	40 L
RD15 EXPT	20 L	HD15S (Slow)	20 L	40 L
RD15 EXPT	20 L	HD15SS (Super Slow)	20 L	40 L

STORAGE

TECHNIGLUE R15 resin and H15 hardeners will keep for one year 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 R5 resin and H5 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.