techniglue®

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			

CURE CHARACTERISTICS							
	R15/H15	R15/H15 Slow	R15EXPT/H15 Super Slow				
Pot Life -100g @ 25°C (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 after 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.



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	20 L	40 L		
RD15 EXPT	20 L	HD15SS	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 & SAFETY

TECHNIGLUE R15 resin and H15 hardeners 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.

ATL composites