

TECHNIREZ R2501 is a solvent free, aluminium-filled epoxy resin specifically designed for use with H2402, H2403 and H2409 hardeners for the fabrication of tools required to operate at elevated temperatures.

The resin and hardener mixtures cure at ambient temperature, and depending on the post cure schedule adopted, are capable of withstanding temperatures up to 120°C.

Typical applications include vacuum forming moulds, prototype injection moulds, blow moulds and foundry patterns.

**MIX RATIO**

10 parts H2402 hardener to 100 parts resin by weight  
 10 parts H2403 hardener to 100 parts resin by weight  
 12 parts H2409 hardener to 100 parts resin by weight

TECHNIREZ R2501 should be stirred thoroughly before use to disperse any filler that may have settled out. Care should be taken to avoid excessive aeration during mixing.

*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				
	R2501	H2402 fast	H2403 medium	H2409 slow
Physical State	Grey viscous liquid	Pale yellow low viscosity liquid	Clear low viscosity liquid	Clear low viscosity liquid
Viscosity mPas@25°C	87,500	112.5	15	112.5
Specific Gravity g/ml@25°C	1.78	0.98	0.93	0.95

CURE CHARACTERISTICS			
	H2402	H2403	H2409
Pot Life - 100g @25°C (in air)	60 minutes	90 minutes	300 minutes
Demold Time	12 hours	12+post cure	12+post cure
Mix viscosity mPas@25°C	8000	5000	7000

POST CURING SCHEDULE			
	H2402	H2403	H2409
HDT achieved 12 hours @ 25°C	50°C	60°C	30°C
+4 hours @ 100°C	90°C	110°C	110°C
+4 hours @ 120°C	110°C	120°C	120°C

TYPICAL CURE PROPERTIES		
	H2402	H2403
Tensile strength	29 MPa	36 MPa
Tensile modulus	7 GPa	6 GPa
Compressive strength	90 MPa	100 MPa
Compressive modulus	3 GPa	3 GPa
Flexural strength	60 MPa	70 MPa
Linear shrinkage	0.06%	0.06%

Cure Schedule - 12 hrs @ 25°C+4 hrs @100°C

### APPLICATION

The resin and hardener must be accurately measured and mixed carefully to avoid air entrapment.

The master model surface should be made porosity free by sealing with a polyurethane or lacquer varnish, followed by several coats of a good quality release agent.

Apply a gelcoat layer of TECHNIREZ R2501 and hardener mixture to the surface of the master mould with a short bristle brush. The addition of a thixotrope, such as WEST SYSTEM® 413 Microfibre Blend, will help hold the mixture on vertical surfaces.

Casting should commence when the gelcoat reaches a tack-free stage. Pour the resin/hardener mixture slowly, and continuously, into the lowest point of the mould.

The heat transfer properties can be enhanced by the addition of coarse aluminium granules. The amount used is not critical, but good results have been achieved with equal volumes of the resin/hardener mixture and granules.

### CLEAN UP

Equipment can be cleaned with ATL's 854 cleaning solvent.

PACK SIZES			
Order Code			
Resin		Hardener	
RD 2501	25 kg	HD 2402	5 kg
		HE 2402	25 kg
		HD 2403	4.5 kg
		HE 2403	22 kg
		HD 2409	5 kg
		HE 2409	22.5 kg

### STORAGE

TECHNIREZ R2501 resin and H2402, H2403, and H2409 hardeners will keep for 2 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

TECHNIREZ R2501 resin and H2402, H2403 and H2409 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.

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. 12.07.18

