

SPECIALITY EPOXY

TECHNICAL DATA SHEET



G/Flex 650

SYSTEM TYPE: TOUGHENED EPOXY ADHESIVE

G/flex® 650 resin is a toughened, versatile, liquid epoxy, formulated for use with G/flex 650 hardener, which will cure at room temperature for permanent waterproof bonding of fibreglass, ceramics, metals, plastics, damp and difficult-to-bond woods. With a modulus of elasticity of 1075 MPa, it is a bit more flexible than standard epoxies and polyester, but much stiffer than adhesive sealants.

G/flex can make structural bonds that can absorb the stress of expansion, contraction, shock and vibration, and it is ideal for bonding dissimilar materials.

It can be modified with WEST SYSTEM fillers and additives and can also be used to wet-out fibreglass reinforcements.

MIX RATIO

1:1 (1 Part Resin : 1 Part Hardener) by volume.

1:1.2 (1 Part Resin : 1.2 Part Hardener) by weight.

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

	Resin	Hardener
Physical State	Clear liquid	Clear pale amber liquid
Viscosity mPas @ 25°C	8,000	17,000
Specific Gravity g/ml@ 25°C	1.15	1.04

CURED PROPERTIES

Pot Life	100g @ 25°C (In Air)	40 Minutes
Thin laminate cure time	@ 25°C	12 hours
Minimum recommended Temperature		10°C
Mix Viscosity mPas	@ 25°C	11,200
Shore D Hardness	1 Day	75
Heat Deflection Temperature	After 24 hours @ 25°C	53°C
Onset of Tg by DSC		59°C
Ultimate Tg		68°C

* Wait 24 hours before subjecting to high loads

STORAGE

G/flex®650 resin and hardener 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.

TYPICAL CURED RESIN MECHANICAL PROPERTIES

Test Method - Neat Cast Sample

Tensile Strength	ASTM D-63	24 MPa
Tensile Elongation	ASTM D-638	32.7%
Tensile Modulus	ASTM D-638	993 MPa
Flexural Strength	ASTM D-790	36 MPa
Flexural Modulus	ASTM D-790	1075 MPa

Typical values; not to be constructed as specification, Room temperature for two weeks.

The test results shown were conducted using procedures dictated by ASTM (American Society for Testing and Materials) test methods. These ASTM test procedures are very specific and help foster objective and consistent test data.

HEALTH AND SAFETY

G/flex®650 resin and hardener have moderate sensitising potential and should be kept out of the eyes and off the skin.

- Use with good ventilation and appropriate safety equipment including impervious gloves and safety glasses.

- If skin contact occurs, remove contaminated clothing immediately and wash the affected area thoroughly, 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 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.

PACK SIZES

Order CODE	Order CODE	PACK
RESIN	HARDENER	
RA650 125 ml	HA650 125 ml	250 ml
RB650 500 ml	HB650 500 ml	1 L
RC650 4 L	HC650 4 L	8 L

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