

G/flex® Epoxies

General Description

G/flex Epoxies are toughened, resilient two-part epoxies engineered for superior adhesion to metals, plastics, glass, masonry, fibreglass and wet or difficult-to-bond woods. G/flex Epoxies are available in two consistencies. G/flex 650 Epoxy is a liquid epoxy with a honey-like consistency. G/flex 655 Epoxy Adhesive is pre-thickened with a consistency similar to toothpaste. Both have an easy-to-use 1:1 mix ratio. G/flex Epoxy provides a relatively long open working time, yet it cures quickly and can be used in cool temperatures.

G/flex Epoxies are toughened to make them resilient and impact resistant, giving them the ability to make structural bonds that can absorb the stresses of expansion, contraction, shock and vibration. With a modulus of elasticity of 1 GPa, G/flex Epoxy is more flexible and can deflect further before breaking than WEST SYSTEM 105/205, while being much stiffer than typical adhesive sealants.

G/flex Epoxy adheres tenaciously to difficult-to-glue hardwoods, both tropical and domestic varieties. It can be used to bond metals, plastics, glass, masonry, and fibreglass. G/flex Epoxy is ideal for repairs to aluminium boats and polyethylene and ABS canoes and kayaks. It can also be used to wet out and bond fibreglass tapes and fabrics. G/flex 650 Epoxy can be modified with WEST SYSTEM fillers and additives and added to other WEST SYSTEM epoxies to improve their toughness and flexibility.

Handling Characteristics

Mix ratio by volume	1 part resin : 1 part hardener
by weight	1.2 : 1
Mix viscosity (at 25°C) Brookfield G/flex 650.....	15000 mPas
G/flex 655	gel
Resin Density G/flex 650 / G/flex 655.....	1.17 gcm ⁻³ / 1.18 gcm ⁻³
Hardener Density G/flex 650 / G/flex 655.....	0.97 gcm ⁻³ / 0.99 gcm ⁻³
Pot life (100g at 25°C)	45 minutes
Working time, thin film*	75 minutes
Cure to a solid, thin film*	3 to 4 hours
Cure to working strength	5 to 7 days
Minimum recommended temperature	5°C

**Epoxy cures faster at higher temperatures and in thicker applications.*

Physical Properties of Cured Epoxy

Specific gravity	1.11
Hardness 1 day (Shore D) BS EN ISO 868	70
14 days (Shore D) BS EN ISO 868	75
Compression yield 14 days BS EN ISO 604	36.32 MPa
Tensile strength BS EN ISO 527-2	23.72 MPa
Tensile elongation BS EN ISO 527-2	32.70%
Tensile modulus BS EN ISO 527-2	0.99 GPa
Flexural strength BS EN ISO 178	35.80 MPa
Flexural modulus BS EN ISO 178	1.08 GPa
Heat deflection temperature ASTM D-648	53°C
Onset of Tg by DSC	59°C
Ultimate Tg by DSC	68°C
Izod Impact ASTM D-256	68.34 J/m

Storage/Shelf Life

Store at room temperature (above 10°C). Keep containers sealed when not in use to prevent contamination. With proper storage, resin and hardener should remain usable for the duration of the specified self-life.

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These are typical properties and cannot be construed as a specification. The end users should test the products to ensure the products are suitable for the intended application. Any information, data, advice or recommendation published by Wessex Resins by other means and whether relating to Wessex Resins' materials or other materials, is given in good faith and believed to be reliable.