PRO-SET®

Technical Data

ADV-175
ADV-273

ADHESIVE EPOXY

The New Standard

EPOXIES for
Laminating
Infusion
Tooling
Assembly

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ISO9001:2008 Certified

REV 1 / Nov 2014

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COMBINED FEATURES

Shear thinning resins and hardeners are thixotropic gels. The mixture fills gaps and will not sag on vertical surfaces. The material wets out the substrate, making priming or pre-wetting unnecessary on most surfaces, while ensuring a good bond.

Fast cure speed hardener provides approximately 20 minutes of working time at 22°C. A bead will gel in 3 to 4 hours.

Room temperature cure properties suitable for many composite components and structures.

High performance pre-thickened, two-part epoxy adhesives for secondary bonding of laminated composites, steel, aluminium, cast iron, concrete, stone, and most wood species. PRO-SET Adhesives will bond these materials to one another in any combination.

Coverage one cartridge set dispenses approximately 14m of 6mm bead, or 5m of 12.7mm bead and will cover approximately 0.65m² when spread with a 3mm x 3mm notched spreader, or 1m² with a 1.5mm x 1.5mm notched spreader.

HANDLING PROPERTIES

Property	Standard	Units	22°C
100g Pot Life	ASTM D2471	minutes	10
Working Time (12.7mm bead)	ASTM D2471	minutes	20
Minimum Cure Temperature	ASTM D2196	°C	7.5
Clamps off cure time (1.5mm bond line)		hours	3
Minimum Storage Temperature		°C	15

MIX RATIO

Method	Resin:Hardener	Resin:Hardener
Weight	2.20:1	100:45.5
Volume	2.00:1	100:50.0

DENSITY

State	Units	22°C
Resin	gcm^{-3}	1.17
Hardener	gcm^{-3}	1.05
Mixed	gcm^{-3}	1.13

MECHANICAL PROPERTIES

Property	Standard	Units	22°C x 2 Weeks
Hardness	ASTM D2240	Shore D	78 (after 1 day)
Hardness	ASTM D2240	Shore D	82
Compression Yield	ASTM D695	MPa	73.91
Tensile Strength	ASTM D638	MPa	43.09
Tensile Modulus	ASTM D638	GPa	2.62
Tensile Elongation	ASTM D638	%	4.2
Flexural Strength	ASTM D790	MPa	77.66
Flexural Modulus	ASTM D790	GPa	2.55
Lap Shear on 1018 Steel	ASTM D1002	MPa	15.72
Lap Shear on 2024T Aluminium	ASTM D1002	MPa	12.60
Tensile Adhesion to 1018 Steel	ASTM D4541	MPa	17.55
Tensile Adhesion to 2024T Aluminium	ASTM D4541	MPa	9.80
Izod Impact, notched	ASTM-256	J/m	50.84

THERMAL PROPERTIES

Property	Standard	Units	22°C x 2 Weeks
Tg DMA Peak Tan Delta	ASTM E1640*[1]	°C	66
Tg DSC Onset - 1st Heat	ASTM E1356	°C	50
Tg DSC Ultimate	ASTM E1356	°C	69.1*[2]
Heat Deflection Temperature	ASTM D648	°C	45

*[1] 1Hz, 3°C per minute.
*[2] Additional post cure may be required; contact Technical Department for details.
Test specimens were neat epoxy (without fibre reinforcement).
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 or obtained from 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.