

PRO-SET®

Technical Data

ADV-175G

ADV-275

BIOBASED

ADHESIVE EPOXY

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.

Medium cure speed hardener provides approximately 75 minutes of working time at 22°C. A bead will gel in 8 to 9 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.

The biobased content of PRO-SET ADV-175G resin is 32% as measured according to the ASTM D6866-18 test method.

HANDLING PROPERTIES

| Property | Standard | Units | 22°C |
|--|------------|---------|------|
| 100g Pot Life | ASTM D2471 | minutes | 34 |
| Working Time (12.7mm bead) | ASTM D2471 | minutes | 75 |
| Minimum Cure Temperature | ASTM D2196 | °C | 15 |
| Clamps off cure time (1.5mm bond line) | | hours | 8 |
| 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 | 1.05 |

MECHANICAL PROPERTIES

| Property | Standard | Units | 22°C x 2 Weeks |
|-------------------------------------|------------|---------|------------------|
| Hardness | ASTM D2240 | Shore D | 80 (after 1 day) |
| Hardness | ASTM D2240 | Shore D | 85 |
| Compression Yield | ASTM D695 | MPa | 86.70 |
| Tensile Strength | ASTM D638 | MPa | 54.60 |
| Tensile Modulus | ASTM D638 | GPa | 3.58 |
| Tensile Elongation | ASTM D638 | % | 3.5 |
| Flexural Strength | ASTM D790 | MPa | 98.10 |
| Flexural Modulus | ASTM D790 | GPa | 3.86 |
| Lap Shear on 1018 Steel | ASTM D1002 | MPa | 13.70 |
| Lap Shear on 2024T Aluminium | ASTM D1002 | MPa | 9.10 |
| Tensile Adhesion to 1018 Steel | ASTM D4541 | MPa | 19.40 |
| Tensile Adhesion to 2024T Aluminium | ASTM D4541 | MPa | 9.90 |
| Izod Impact, notched | ASTM-256 | J/m | 60.38 |

THERMAL PROPERTIES

| Property | Standard | Units | 22°C x 2 Weeks |
|-----------------------------|--------------|-------|----------------|
| Tg DMA Peak Tan Delta | ASTM E1640*1 | °C | 65.5 |
| Tg DSC Onset - 1st Heat | ASTM E1356 | °C | 51.3 |
| Tg DSC Ultimate | ASTM E1356 | °C | 82.2*2 |
| Heat Deflection Temperature | ASTM D648 | °C | 49 |

*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.

The New
Standard

EPOXIES for
Laminating
Infusion
Tooling
Assembly

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& Adhesives

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ISO9001:2015 Certified

REV 1 / Aug 2022

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