

PRO-SET®

Technical Data

ADV-175 ADV-277

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.

Slow cure speed hardener provides approximately 150 minutes of working time at 72°F (22°C).

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, aluminum, 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 47 ft of 1/4" bead, or 17 ft of 1/2" bead and will cover approximately 7 sq ft when spread with a 1/8" x 1/8" notched spreader, or 12 sq ft with a 1/16" x 1/16" notched spreader.

The New
Standard

EPOXIES for
Laminating
Infusion
Tooling
Assembly

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ISO9001:2015 Certified

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HANDLING PROPERTIES

| Property | Standard | Units | 72°F (22°C) |
|--------------------------|------------|---------|-------------|
| 100g Pot Life | ASTM D2471 | minutes | 45-55 |
| Working Time (1/2" bead) | ASTM D2471 | minutes | 135-165 |
| Minimum Cure Temp | ASTM D2196 | °F (°C) | 65 (18) |

MIX RATIO

| Method | Resin:Hardener | Resin:Hardener |
|--------|----------------|----------------|
| Weight | 2.29:1 | 100:43.7 |
| Volume | 2.00:1 | 100:50.0 |

DENSITY

| State | Units | 72°F (22°C) |
|----------|---------------|-------------|
| Resin | lb/gal (g/cc) | 9.76 (1.17) |
| Hardener | lb/gal (g/cc) | 8.51 (1.02) |

MECHANICAL PROPERTIES

| Property | Standard | Units | 72°F (22°C) x 2 wk |
|------------------------------------|------------|-----------|--------------------|
| Hardness | ASTM D2240 | Type D | 84 |
| Compression Yield | ASTM D695 | psi (MPa) | 11,800 (81) |
| Tensile Strength | ASTM D638 | psi (MPa) | 7,070 (49) |
| Tensile Modulus | ASTM D638 | psi (GPa) | 4.20E+05 (2.9) |
| Tensile Elongation | ASTM D638 | % | 4.4 |
| Flexural Strength | ASTM D790 | psi (MPa) | 12,100 (83) |
| Flexural Modulus | ASTM D790 | psi (GPa) | 4.00E+05 (2.76) |
| Lap Shear on 1018 Steel | ASTM D1002 | psi (MPa) | 1,980 (14) |
| Lap Shear on 2024T Aluminum | ASTM D1002 | psi (MPa) | 1,980 (14) |
| Tensile Adhesion to 1018 Steel | ASTM D4541 | psi (MPa) | 2,580 (18) |
| Tensile Adhesion to 2024T Aluminum | ASTM D4541 | psi (MPa) | 1,720 (12) |

THERMAL PROPERTIES

| Property | Standard | Units | 72°F (22°C) x 2 wk |
|-----------------------------|------------|---------|--------------------|
| Tg DSC Onset-1st Heat | ASTM E1356 | °F (°C) | 127 (53) |
| Heat Deflection Temperature | ASTM D648 | °F (°C) | 123 (51) |

¹Store PRO-SET® Epoxy resins and hardeners at room temperature in sealed containers until shortly before use. As with many high-performance epoxy resins, repeated exposure to low temperatures during storage may cause the resin to crystallize. If this occurs, warm the resin to 125° F and stir to dissolve crystals. Hardeners may form carbamation when exposed to CO₂ and moisture in the atmosphere for extended periods of time. Prevent carbamation by protecting hardeners from exposure until immediately prior to processing.

Test specimens were neat epoxy (without fiber reinforcement).
Typical values, not to be construed as specification.



Shelf Life

QC Tinting Available