PRO-SET®

Technical Data
ADV-175
ADV-277
ADHESIVE EPOXY

The New Standard

EPOXIES for
Laminating
Infusion
Tooling
Assembly

Gougeon Brothers, Inc.
P.O. Box 908
Bay City, MI 48707
prosetepoxy.com
888-377-6738

ISO9001:2008 Certified

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.

Shelf life is 18 months for resin and 18 months for hardener when properly stored[1].

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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)

[1]Store 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 CO_2 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.