

3M Scotch-Weld™ DP825 Acrylic Adhesives

Category: Polymer, Adhesive

Material Notes:

3M™ Scotch-Weld™ Acrylic Adhesive DP825 is a two-part, 1:1 mix ratio, toughened acrylic structural adhesives. They exhibit excellent shear and peel strengths along with good impact, durability and bond well to many metals, ceramics, wood and most plastics with minimal surface preparation. Information provided by 3M

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Scotch-Weld-DP825-Acrylic-Adhesives.php

| Physical Properties | Metric | English | Comments |
|---------------------|------------|------------|-------------|
| Viscosity | >= 3500 cP | >= 3500 cP | Base |
| | >= 7500 cP | >= 7500 cP | Accelerator |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|-----------|----------|--|
| Hardness, Shore D | 70 | 70 | |
| Shear Strength | 5.52 MPa | 800 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in Toulene |
| | 6.55 MPa | 950 psi | Overlap, Acrylic, Substrate Failure |
| | 6.89 MPa | 1000 psi | Overlap, Etched Aluminum |
| | 7.067 MPa | 1025 psi | Overlap, PC, Substrate Failure |
| | 7.24 MPa | 1050 psi | Overlap, ABS, Substrate Failure |
| | 9.65 MPa | 1400 psi | Overlap, PVC, Substrate Failure |
| | 15.00 MPa | 2175 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in 66°C tap water |
| | 17.41 MPa | 2525 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in Unleaded gasoline |
| | 17.9 MPa | 2600 psi | Overlap, Cold-Rolled Steel - slightly oily, Cohesive Failure |
| | 18.10 MPa | 2625 psi | Overlap, Green Fiberglass Reinforced Plastic, Adhesive Failure |
| | 18.10 MPa | 2625 psi | Overlap, Etched Aluminum |
| | 18.44 MPa | 2675 psi | Overlap, Etched Aluminum |
| | 20.86 MPa | 3025 psi | Overlap, Cold-Rolled Steel - solvent cleaned, Adhesive Failure |
| | | | |



| Mechanical Properties | 26.37 MPa Metric | 8825 psi English | Overlan, Etched Aluminum tested Comments of Immersion in IPA |
|-----------------------|---------------------|---------------------|--|
| | 26.5 MPa | 3850 psi | Overlap, Aluminum - etched, Adhesive Failure |
| | 26.72 MPa | 3875 psi | Overlap, Stainless Steel, Adhesive Failure |
| | 27.06 MPa | 3925 psi | Overlap, Aluminum - abraded, 150 grit sandpaper, Adhesive Failure |
| | 28.3 MPa | 4100 psi | Overlap, Aluminum - bare, Adhesive Failure |
| | 30.3 MPa | 4400 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in Diesel fuel |
| | 30.85 MPa | 4475 psi | Overlap, Etched Aluminum |
| | 32.1 MPa | 4650 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in 50% Anitfreeze |
| | 33.1 MPa | 4800 psi | Overlap, Etched Aluminum cured for 7 days @ RT |
| | 33.4 MPa | 4850 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in 20% bleach solution |
| | 46.9 MPa | 6800 psi | Overlap, Etched Aluminum tested after 1 week of Immersion in 66°C and 80% RH |
| Peel Strength | 4.91 kN/m | 28.0 pli | Etched Al/Etched Al after 1 week at RT cure |
| | | | |

| Processing Properties | Metric | English | Comments |
|-----------------------|----------------|------------------|-----------|
| Cure Time | 240 - 1440 min | 4.00 - 24.0 hour | Full cure |

| Descriptive Properties | Value | Comments |
|------------------------|-------------|-------------|
| Appearance | Off-white | Base |
| | Pale yellow | |
| | Yellow | Accelerator |

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