

3M Scotch-Weld™ DP190 Translucent Epoxy Adhesive

Category : Polymer , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

3M™ Scotch-Weld™ Epoxy Adhesive DP190 Translucent is a 1:1 mix ratio similar to Scotch-Weld™ Epoxy Adhesive 2216 B/A Translucent but faster curing. Information provided by 3M

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Scotch-Weld-DP190-Translucent-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Brookfield Viscosity	2000 - 8000 cP	2000 - 8000 cP	Base, RFV #7 at 20 rpm
	7000 - 15000 cP	7000 - 15000 cP	Accelerator, RFV #7 at 20 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	35	35	ASTM D2240
Tensile Strength at Break	19.0 MPa	2760 psi	ASTM D882
Elongation at Break	120 %	120 %	ASTM D882
Shear Strength	0.621 MPa	90.0 psi	Overlap, Polypropylene
	1.79 MPa	260 psi	Overlap, Glass, Borosilicate
	2.07 MPa	300 psi	Overlap, Glass, +3M Scotch-Weld Primer 3901
	2.41 MPa	350 psi	Overlap, Acrylic
	2.76 MPa	400 psi	Overlap, Polycarbonate
	2.76 MPa	400 psi	Overlap, ABS
	4.48 MPa	650 psi	Overlap, Wood, Fir
	4.48 MPa	650 psi	Overlap, PVC
	5.86 MPa	850 psi	Overlap, Sanded Aluminum
	5.86 MPa	850 psi	Overlap, CRS
6.89 MPa	1000 psi	Overlap, Fiberglass	
12.4 MPa	1800 psi	Overlap, Etched Aluminum	
1.10 MPa	160 psi	Overlap	
@Temperature 82.0 °C	@Temperature 180 °F		

Mechanical Properties	Metric	English	Comments
	1.38 MPa @Temperature 66.0 °C	200 psi @Temperature 151 °F	
	2.00 MPa @Temperature 49.0 °C	290 psi @Temperature 120 °F	Overlap
	8.27 MPa @Temperature 21.0 °C	1200 psi @Temperature 69.8 °F	Overlap
	24.1 MPa @Temperature -55.0 °C	3500 psi @Temperature -67.0 °F	Overlap
Peel Strength	0.175 kN/m @Temperature 82.0 °C	1.00 pli @Temperature 180 °F	180°
	0.351 kN/m @Temperature 66.0 °C	2.00 pli @Temperature 151 °F	180°
	0.526 kN/m @Temperature 49.0 °C	3.00 pli @Temperature 120 °F	180°
	0.526 kN/m @Temperature -55.0 °C	3.00 pli @Temperature -67.0 °F	180°
	3.51 kN/m @Temperature 21.0 °C	20.0 pli @Temperature 69.8 °F	180°

Thermal Properties	Metric	English	Comments
CTE, linear	86.0 µm/m-°C @Temperature 5.00 - 20.0 °C	47.8 µin/in-°F @Temperature 41.0 - 68.0 °F	Below Tg
	166 µm/m-°C @Temperature 75.0 - 140 °C	92.2 µin/in-°F @Temperature 167 - 284 °F	Above Tg
Thermal Conductivity	0.136 W/m-K @Thickness 6.35 mm, Temperature 43.3 °C	0.944 BTU-in/hr-ft ² -°F @Thickness 0.250 in, Temperature 110 °F	
Glass Transition Temp, Tg	10.0 °C	50.0 °F	Onset
	27.0 °C	80.6 °F	Mid-Point

Electrical Properties	Metric	English	Comments

Volume Resistivity Electrical Properties	7.50e+10 ohm-cm Metric	7.50e+10 ohm-cm English	ASTM D257 Comments
Dielectric Constant	6.2 @Frequency 1000 Hz	6.2 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	34.4 kV/mm @Thickness 0.762 mm	875 kV/in @Thickness 0.0300 in	ASTM D149
Dissipation Factor	0.16 @Frequency 1000 Hz	0.16 @Frequency 1000 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Cure Time	240 min	4.00 hour	Tack-free time
	360 min	6.00 hour	Time to Handling Strength
	20200 min	336 hour	Full Cure

Descriptive Properties	Value	Comments
Appearance	Amber	Accelerator
	Clear	Base
	Translucent	

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