

## 3M Scotch-Weld™ DP100 Plus Clear Epoxy Adhesive

Category : Polymer , Thermoset , Epoxy , Epoxy Adhesive

### Material Notes:

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus Clear is a fast setting, two-part, 1:1 mix ratio mercaptan-cured epoxy adhesive. It is a unique among fast setting mercaptan cure epoxies in that it combines high shear strength with good peel performance properties. It is transparent and slightly flexible when cured. Information provided by 3M

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3M-Scotch-Weld-DP100-Plus-Clear-Epoxy-Adhesive.php](http://www.lookpolymers.com/polymer_3M-Scotch-Weld-DP100-Plus-Clear-Epoxy-Adhesive.php)

Physical Properties	Metric	English	Comments
Brookfield Viscosity	4000 - 11000 cP	4000 - 11000 cP	Base, RVF #7 spindle, 20 rpm @ 27°C
	7000 - 13000 cP	7000 - 13000 cP	Accelerator, RVF #7 spindle, 20 rpm @ 27°C

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	83	83	ASTM D2240
Tensile Strength at Break	12.8 MPa	1860 psi	ASTM D882
Elongation at Break	75 %	75 %	ASTM D882
Shear Strength	0.552 MPa	80.0 psi	Overlap, Polypropylene
	1.72 MPa	250 psi	Overlap, Glass, Borosilicate
	1.93 MPa	280 psi	Overlap, ABS
	2.07 MPa	300 psi	Overlap, +3M Scotch-Weld Primer EC3901
	2.07 MPa	300 psi	Overlap, Acrylic
	3.10 MPa	450 psi	Overlap, PVC
	4.14 MPa	600 psi	Overlap, Polycarbonate
	4.83 MPa	700 psi	Overlap, Wood, Fir
	10.3 MPa	1500 psi	Overlap, Fiberglass
	11.7 MPa	1700 psi	Overlap, Cold Rolled Steel
12.4 MPa	1800 psi	Overlap, Sanded Aluminum	
24.1 MPa	3500 psi	Overlap, Etched Aluminum	
1.38 MPa	200 psi	Overlap	

Mechanical Properties	@Temperature 82.0 °C Metric	@Temperature 180 °F English	Comments
	2.76 MPa	400 psi	Overlap
	@Temperature 66.0 °C	@Temperature 151 °F	
	5.17 MPa	750 psi	Overlap
	@Temperature 49.0 °C	@Temperature 120 °F	
	20.7 MPa	3000 psi	Overlap
	@Temperature -55.0 °C	@Temperature -67.0 °F	
	24.1 MPa	3500 psi	Overlap
	@Temperature 21.0 °C	@Temperature 69.8 °F	
Peel Strength	0.175 kN/m	1.00 pli	
	0.351 kN/m	2.00 pli	180°
	0.351 kN/m	2.00 pli	180°
	2.28 kN/m	13.0 pli	180°
	2.63 kN/m	15.0 pli	180°

Thermal Properties	Metric	English	Comments
CTE, linear	93.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	51.7 $\mu\text{in}/\text{in}\cdot\text{°F}$	Below Tg
	@Temperature 5.00 - 20.0 °C	@Temperature 41.0 - 68.0 °F	
	182 $\mu\text{m}/\text{m}\cdot\text{°C}$	101 $\mu\text{in}/\text{in}\cdot\text{°F}$	Above Tg
	@Temperature 40.0 - 140 °C	@Temperature 104 - 284 °F	
Thermal Conductivity	0.133 W/m-K	0.923 BTU-in/hr-ft <sup>2</sup> -°F	
	@Thickness 6.35 mm, Temperature 44.3 °C	@Thickness 0.250 in, Temperature 112 °F	
Glass Transition Temp, Tg	23.0 °C	73.4 °F	Onset
	29.0 °C	84.2 °F	Mid-point

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.70e+11 ohm-cm	6.70e+11 ohm-cm	ASTM D257
Dielectric Constant	6.6	6.6	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	28.0 kV/mm	710 kV/in	

Dielectric Strength Electrical Properties	Metric @ Thickness 0.762 mm	English @ Thickness 0.0300 in	ASTM D150 Comments
Dissipation Factor	0.060 @Frequency 1000 Hz	0.060 @Frequency 1000 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Cure Time	9.00 - 10.0 min	0.150 - 0.167 hour	Tack-Free
	2880 min	48.0 hour	

Descriptive Properties	Value	Comments
Appearance	Clear	
	Clear	Base
	Clear	Accelerator

## Contact Songhan Plastic Technology Co.,Ltd.

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