

3M Scotch-Weld™ DP810 Black Structural Adhesive

Category: Polymer, Adhesive

Material Notes:

3M™ Scotch-Weld™ Low-Odor Acrylic Adhesives are two-part, 1:1 mix ratio, toughened structural adhesives with less odor than most acrylic adhesives. The adhesives have excellent shear and peel strength along with good impact resistance and durability. They can quickly bond to most metals, ceramics, rubbers, plastics and wood with minimal surface preparation. Information provided by 3M

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Scotch-Weld-DP810-Black-Structural-Adhesive.php

Physical Properties	Metric	English	Comments
Viscosity	17000 - 21000 cP	17000 - 21000 cP	Accelerator
	18000 - 22000 cP	18000 - 22000 cP	Base
	20000 cP	20000 cP	

Mechanical Properties	Metric	English	Comments
Shear Strength	0.207 MPa	30.0 psi	Overlap at 10 minutes after bonding
	0.345 MPa	50.0 psi	Overlap, Acetone for 14 days, Cohesive Failure
	0.517 MPa	75.0 psi	Overlap, MEK for 14 days, Cohesive Failure
	3.45 MPa	500 psi	Overlap, Polycarbonate, Adhesive/Cohesive Failure
	3.79 MPa	550 psi	Overlap, Acrylic, Substrate Failure
	4.83 MPa	700 psi	Overlap, ABS, Adhesive/Cohesive Failure
	6.89 MPa	1000 psi	Overlap, PVC, Substrate Failure
	7.93 MPa	1150 psi	Overlap at 20 minutes after bonding
	10.3 MPa	1500 psi	Overlap, 71°C 100% RH for 14 days, Mixed Mode of AF&CF
	11.4 MPa	1650 psi	Overlap, 71°C soak for 14 days, Mixed Mode of AF&CF
	15.2 MPa	2200 psi	Overlap at 1 hr after bonding
	17.6 MPa	2550 psi	Overlap, Gasoline for 14 days, Cohesive Failure
	17.9 MPa	2600 psi	Overlap, Toluene for 14 days, Cohesive Failure
	18.6 MPa	2700 psi	Overlap at 2 hrs after bonding



20.7 MPa 3000 psi Overlap, Green FRP, Cohesive Failure	Mechanical Properties	Metric 20.0 MPa	English	Comments Overlap at 2 hrs after bonding
21.0 MPa 3050 psi Coverlap, IPA for 14 days, Cohesive Failure		20.7 MPa	3000 psi	•
22.1 MPa 3200 psi Overlap, 20% Bleach for 14 days, Cohesive Failure 23.8 MPa 3450 psi Overlap, 20% Bleach for 14 days, Cohesive Failure 23.8 MPa 3450 psi Overlap, CRS, Cohesive Failure 24.1 MPa 3500 psi Overlap, Stainless Steel, Cohesive Failure 24.5 MPa 3500 psi Overlap, Stainless Steel, Cohesive Failure 24.5 MPa 3500 psi Overlap at 2 hrs after bonding 24.8 MPa 3600 psi Overlap, CRS, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 26.5 MPa 3850 psi Overlap, 14 days, Cohesive Failure 26.9 MPa 3900 psi Overlap, Bare Aluminum, Cohesive Failure 27.2 MPa 3950 psi Overlap, 50% Antifreze for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 1200 psi Overlap ©Temperature 82.0 °C @Temperature 180 °F 8.27 MPa 1200 psi Overlap ©Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure 0 Verlap, Cohesive Failure Overlap, Cohesive Failure Overlap, Cohesive Failure Overlap, Cohesive Failure Overlap, Cohesive Failure			•	
22.4 MPa 3250 psi Overlap, 20% Bleach for 14 days, Cohesive Failure 23.8 MPa 3450 psi Overlap, Oily CRS, Cohesive Failure 24.1 MPa 3500 psi Overlap, Stainless Steel, Cohesive Failure 24.5 MPa 3550 psi Overlap at 2 hrs after bonding 24.8 MPa 3600 psi Overlap, CRS, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.9 MPa 3900 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 1200 psi Overlap @Temperature 82.0 °C @Temperature 180 °F Overlap @Temperature -55.0 °C @Temperature -67.0 °F Overlap 13.8 MPa 2000 psi Overlap @Temperature -29.0 °C @Temperature -20.2 °F Overlap, Adhesion Failure 0 Verlap, Cohesive Failure 0 Verlap, Cohesive Failure 0 Verlap, Cohesive Failure 0 Verlap, Cohesive Failure		21.0 MPa	3050 psi	
23.8 MPa 3450 psi Overlap, Oily CRS, Cohesive Failure 24.1 MPa 3500 psi Overlap, Stainless Steel, Cohesive Failure 24.5 MPa 3550 psi Overlap at 2 hrs after bonding 24.8 MPa 3600 psi Overlap at 2 hrs after bonding 24.8 MPa 3600 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.5 MPa 3850 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 1200 psi Overlap ©Temperature 82.0 °C ©Temperature 180 °F 13.8 MPa 2000 psi Overlap ©Temperature -55.0 °C ©Temperature -67.0 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure ©Temperature -99.0 °C ©Temperature -20.2 °F 13.8 MPa 2000 psi Overlap, Cohesive Failure Overlap, Cohesive Failure Overlap, Cohesive Failure		22.1 MPa	3200 psi	Overlap at 2 hrs after bonding
24.1 MPa 3500 psi Overlap, Stainless Steel, Cohesive Failure 24.5 MPa 3550 psi Overlap at 2 hrs after bonding 24.8 MPa 3600 psi Overlap, CRS, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.9 MPa 3900 psi Overlap, Bare Aluminum, Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 1200 psi Overlap, Etched Aluminum, Cohesive Failure 3.27 MPa 1200 psi Overlap, Etched Aluminum, Cohesive Failure 3.28 MPa 1200 psi Overlap © Temperature -55.0 °C © Temperature -67.0 °F Overlap 13.8 MPa 2000 psi Overlap, Adhesion Failure 3.8 MPa 2000 psi Overlap, Cohesive Failure 0 Verlap, Cohesive Failure 0 Verlap, Cohesive Failure		22.4 MPa	3250 psi	
24.5 MPa 3550 psi Overlap at 2 hrs after bonding 24.8 MPa 3600 psi Overlap, CRS, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, 14 days, Cohesive Failure 26.9 MPa 3900 psi Overlap, 16 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, 16 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, 16 days, Cohesive Failure 3.45 MPa 500 psi Overlap, 16 days, Cohesive Failure 3.45 MPa 500 psi Overlap, 16 days, Cohesive Failure 3.45 MPa 1200 psi Overlap @Temperature 82.0 °C @Temperature 180 °F 13.8 MPa 2000 psi Overlap @Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi Overlap, Cohesive Failure		23.8 MPa	3450 psi	Overlap, Oily CRS, Cohesive Failure
24.8 MPa 3600 psi Overlap, CRS, Cohesive Failure 25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.9 MPa 3900 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 8.27 MPa 1200 psi Overlap @Temperature 82.0 °C @Temperature 180 °F 13.8 MPa 2000 psi Overlap @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure 24.8 MPa 3600 psi Overlap, Cohesive Failure 0 Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi Overlap @Temperature 49.0 °C @Temperature 75.2 °F Overlap		24.1 MPa	3500 psi	
25.9 MPa 3750 psi Overlap, Abraded Aluminum, Cohesive Failure 25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.9 MPa 3900 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 8.27 MPa 1200 psi Overlap @Temperature 82.0 °C @Temperature 180 °F Overlap 13.8 MPa 2000 psi Overlap @Temperature -29.0 °C @Temperature -67.0 °F Overlap 13.8 MPa 2000 psi Overlap, Adhesion Failure 13.8 MPa 2000 psi Overlap, Cohesive Failure 24.8 MPa 3600 psi Overlap @Temperature 49.0 °C @Temperature 120 °F Overlap Overlap, Cohesive Failure		24.5 MPa	3550 psi	Overlap at 2 hrs after bonding
25.9 MPa 3750 psi Overlap, 14 days, Cohesive Failure 26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.9 MPa 3900 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 500 psi Overlap @Temperature 82.0 °C @Temperature 180 °F 13.8 MPa 2000 psi Overlap @Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure 3.45 MPa 2000 psi Overlap, Adhesion Failure 24.8 MPa 3600 psi Overlap @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi Overlap @Temperature 24.0 °C @Temperature 75.2 °F		24.8 MPa	3600 psi	Overlap, CRS, Cohesive Failure
26.5 MPa 3850 psi Overlap, Bare Aluminum, Cohesive Failure 26.9 MPa 3900 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 500 psi Overlap, Etched Aluminum, Cohesive Failure 8.27 MPa 1200 psi Overlap @Temperature 82.0 °C @Temperature 180 °F 13.8 MPa 2000 psi @Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi @Temperature 24.0 °C @Temperature 75.2 °F Overlap, Adhesion Failure Overlap, Cohesive Failure		25.9 MPa	3750 psi	
26.9 MPa 3900 psi Overlap, 50% Antifreeze for 14 days, Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 500 psi Overlap @Temperature 82.0 °C @Temperature 180 °F 8.27 MPa 1200 psi Overlap @Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi Overlap, Adhesion Failure @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi Overlap @Temperature 24.0 °C @Temperature 75.2 °F		25.9 MPa	3750 psi	Overlap, 14 days, Cohesive Failure
Cohesive Failure 27.2 MPa 3950 psi Overlap, Diesel Fuel for 14 days, Cohesive Failure 29.0 MPa 4200 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa 6 Temperature 82.0 °C 6 Temperature 180 °F 13.8 MPa 6 Temperature -29.0 °C 6 Temperature -20.2 °F 13.8 MPa 2000 psi 6 Temperature -29.0 °C 6 Temperature -20.2 °F 24.8 MPa 3600 psi 6 Temperature 24.0 °C 6 Temperature 75.2 °F Overlap		26.5 MPa	3850 psi	
29.0 MPa 4200 psi Overlap, Etched Aluminum, Cohesive Failure 3.45 MPa © Temperature 82.0 °C © Temperature 180 °F 8.27 MPa 1200 psi © Temperature -55.0 °C © Temperature -67.0 °F 13.8 MPa 2000 psi © Temperature -29.0 °C © Temperature -20.2 °F 13.8 MPa 2000 psi © Temperature -20.2 °F 24.8 MPa 3600 psi © Temperature 120 °F 24.8 MPa 3600 psi © Temperature 75.2 °F Overlap, Cohesive Failure		26.9 MPa	3900 psi	
3.45 MPa 500 psi ©Temperature 82.0 °C ©Temperature 180 °F 8.27 MPa 1200 psi ©Temperature -55.0 °C ©Temperature -67.0 °F 13.8 MPa 2000 psi ©Temperature -29.0 °C ©Temperature -20.2 °F 13.8 MPa 2000 psi ©Temperature -29.0 °C ©Temperature -20.2 °F 13.8 MPa 3600 psi ©Temperature 49.0 °C ©Temperature 120 °F 24.8 MPa 3600 psi ©Temperature 24.0 °C ©Temperature 75.2 °F		27.2 MPa	3950 psi	
@Temperature 82.0 °C @Temperature 180 °F 8.27 MPa 1200 psi @Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi @Temperature -20.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi @Temperature 24.0 °C @Temperature 75.2 °F Overlap Overlap Overlap, Cohesive Failure		29.0 MPa	4200 psi	
@Temperature 82.0 °C @Temperature 180 °F 8.27 MPa 1200 psi @Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi QTemperature -20.0 °C @Temperature -20.2 °F 2000 psi QTemperature -20.0 °C @Temperature -20.2 °F 24.8 MPa 3600 psi QTemperature 24.0 °C @Temperature 75.2 °F Overlap, Cohesive Failure Overlap Overlap Overlap		3.45 MPa	500 psi	
@Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi QTemperature -20.0 °C @Temperature -20.2 °F 2000 psi QTemperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi QTemperature 24.0 °C @Temperature 75.2 °F Overlap Overlap Overlap		@Temperature 82.0 °C	@Temperature 180 °F	Overlap
@Temperature -55.0 °C @Temperature -67.0 °F 13.8 MPa 2000 psi		8.27 MPa	1200 psi	
Overlap, Adhesion Failure @Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi @Temperature 24.0 °C @Temperature 75.2 °F Overlap, Cohesive Failure Overlap, Cohesive Failure		@Temperature -55.0 °C	@Temperature -67.0 °F	Uveriap
@Temperature -29.0 °C @Temperature -20.2 °F 13.8 MPa 2000 psi @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi @Temperature 24.0 °C @Temperature 75.2 °F Overlap Overlap		13.8 MPa	2000 psi	Overlan Adhasian Failura
Overlap, Cohesive Failure @Temperature 49.0 °C @Temperature 120 °F 24.8 MPa @Temperature 24.0 °C @Temperature 75.2 °F Overlap Overlap		@Temperature -29.0 °C	@Temperature -20.2 °F	Overlap, Adnesion Failure
@Temperature 49.0 °C @Temperature 120 °F 24.8 MPa 3600 psi Overlap @Temperature 24.0 °C @Temperature 75.2 °F		13.8 MPa	2000 psi	Overlan Cohecive Egilere
Overlap @Temperature 24.0 °C @Temperature 75.2 °F		@Temperature 49.0 °C	@Temperature 120 °F	overlap, conesive Failule
@Temperature 24.0 °C @Temperature 75.2 °F		24.8 MPa	3600 psi	Overlan
Peel Strength 5.26 kN/m 30.0 pli T-Peel		@Temperature 24.0 °C	@Temperature 75.2 °F	Очепар
	Peel Strength	5.26 kN/m	30.0 pli	T-Peel



Processing Properties	Metric	English	Comments
Cure Time	10.0 - 20.0 min	0.167 - 0.333 hour	Time to Handling Strength
	480 - 1440 min	8.00 - 24.0 hour	Full cure

Descriptive Properties	Value	Comments
Appearance	Black	Base
	White	Accelerator

Contact Songhan Plastic Technology Co.,Ltd.

Website: www.lookpolymers.com Email: sales@lookpolymers.com

Tel: +86 021-51131842 Mobile: +86 13061808058

Skype: lookpolymers

Address: United North Road 215, Fengxian District, Shanghai City, China