

## 3M Scotch-Weld™ EC-2086 Structural Adhesive

Category : Polymer , Adhesive

### Material Notes:

3M™ Scotch-Weld™ Structural Adhesive EC-2086 is a one-part, 100% solids thermosetting liquid adhesives. Information provided by 3M

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3M-Scotch-Weld-EC-2086-Structural-Adhesive.php](http://www.lookpolymers.com/polymer_3M-Scotch-Weld-EC-2086-Structural-Adhesive.php)

Mechanical Properties	Metric	English	Comments
Shear Strength	18.16 MPa	2634 psi	Etched Aluminum Overlap, Salt Spray @ 35°C for 356 days
	19.7 MPa	2850 psi	Etched Aluminum Overlap, 100% RH @ 49°C for 356 days
	22.95 MPa	3328 psi	Etched Aluminum Overlap, 100% RH @ 49°C for 180 days
	25.3 MPa	3670 psi	Etched Aluminum Overlap, 100% RH @ 49°C for 90 days
	28.5 MPa	4140 psi	Etched Aluminum Overlap Freon 22 Resistance, 60 days @ RT
	29.13 MPa	4225 psi	Etched Aluminum Overlap Freon 22 Resistance, 1 year @ RT
	30.8 MPa	4470 psi	Etched Aluminum Overlap Freon 22 Resistance, 30 days @ RT
	32.1 MPa	4650 psi	Etched Aluminum Overlap Freon 22 Resistance, Control
	32.35 MPa	4692 psi	Etched Aluminum Overlap, Salt Spray @ 35°C for 180 days
	32.5 MPa	4720 psi	Etched Aluminum Overlap, 100% RH @ 49°C
	33.3 MPa	4830 psi	Etched Aluminum Overlap, Salt Spray @ 35°C for 90 days
	34.92 MPa	5064 psi	Etched Aluminum Overlap, Salt Spray @ 35°C
	39.4 MPa	5710 psi	Etched Aluminum Overlap, Hydraulic Oil @ RT
	39.88 MPa	5784 psi	Etched Aluminum Overlap, Tap Water @ RT
	41.11 MPa	5962 psi	Etched Aluminum Overlap, Tap Water @ RT for 90 days
41.53 MPa	6024 psi	Etched Aluminum Overlap, White Gas @ RT	
42.1 MPa	6100 psi	Etched Aluminum Overlap, Tap Water @ RT for 356 days	

Mechanical Properties	Metric	English	Comments
	42.42 MPa	6102 psi	Etched Aluminum Overlap, Tap Water @ RT for 180 days
	0.896 MPa @Temperature 177 °C	130 psi @Temperature 351 °F	Solvent Wiped Cold Rolled Steel Overlap
	3.31 MPa @Temperature 121 °C	480 psi @Temperature 250 °F	Solvent Wiped Cold Rolled Steel Overlap
	3.45 MPa @Temperature 177 °C	500 psi @Temperature 351 °F	Etched Aluminum Overlap
	15.2 MPa @Temperature 121 °C	2200 psi @Temperature 250 °F	Etched Aluminum Overlap
	16.3 MPa @Temperature 82.0 °C	2360 psi @Temperature 180 °F	Solvent Wiped Cold Rolled Steel Overlap
	18.6 MPa @Temperature 24.0 °C	2700 psi @Temperature 75.2 °F	Solvent Wiped Cold Rolled Steel Overlap
	20.7 MPa @Temperature -55.0 °C	3000 psi @Temperature -67.0 °F	Etched Aluminum Overlap
	23.0 MPa @Temperature -40.0 °C	3340 psi @Temperature -40.0 °F	Solvent Wiped Cold Rolled Steel Overlap
	24.1 MPa @Temperature 232 °C	3500 psi @Temperature 450 °F	Bond Line
	29.6 MPa @Temperature 218 °C	4300 psi @Temperature 424 °F	Bond Line
	34.5 MPa @Temperature 82.0 °C	5000 psi @Temperature 180 °F	Etched Aluminum Overlap
	34.5 MPa @Temperature 24.0 °C	5000 psi @Temperature 75.2 °F	Etched Aluminum Overlap
	36.5 MPa @Temperature 204 °C	5300 psi @Temperature 399 °F	Bond Line
	37.9 MPa @Temperature 11.0 °C	5500 psi @Temperature 51.8 °F	Bond Line
	37.9 MPa	5500 psi	Bond Line

Mechanical Properties	@Temperature 177 °C Metric	@Temperature 351 °F English	Comments
Peel Strength	8.77 kN/m	50.0 pli	Solvent Wiped T-Peel

Thermal Properties	Metric	English	Comments
CTE, linear	47.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	26.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature -18.0 - 27.0 °C	@Temperature -0.400 - 80.6 °F	
Thermal Conductivity	0.429 W/m-K	2.98 BTU-in/hr-ft <sup>2</sup> -°F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.60e+14 ohm-cm	3.60e+14 ohm-cm	
Surface Resistance	1.00e+17 ohm	1.00e+17 ohm	
Dielectric Constant	10.8	10.8	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Strength	11.4	11.4	
	@Temperature 60.0 °C	@Temperature 140 °F	
Dielectric Strength	4.84 kV/mm	123 kV/in	
Dissipation Factor	0.016	0.016	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dissipation Factor	0.228	0.228	
	@Temperature 60.0 °C	@Temperature 140 °F	
Arc Resistance	34 sec	34 sec	

Descriptive Properties	Value	Comments
Appearance	Gray	

## Contact Songhan Plastic Technology Co.,Ltd.

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