

3M™ Automix™ Truck Line SMC/Fiberglass Repair Adhesive - 90

Data Sheet

3M Part No.(s)
08274

3M Part Descriptor(s)
3M™ Automix™ Truck Line SMC/Fiberglass Repair Adhesive - 90

Detailed Product Description

3M™ Automix™ Truck Line SMC/Fiberglass Repair Adhesive - 90 is a two-part epoxy adhesive. It has an extended work-time that can be accelerated with heat if needed. 3M™ Automix™ Truck Line SMC/Fiberglass Repair Adhesive - 90 has excellent adhesion to a wide variety of plastic and metal substrates. It is packaged in a 400 ml Duo-Pak cartridge.

Features, Advantages, Benefits

Features	<ul style="list-style-type: none"> ● Epoxy Adhesive ● Duo-Pak cartridge ● Paintable ● Contains glass beads to maintain a 10 mil bondline
Advantages	<ul style="list-style-type: none"> ● Durable ● Easy to Apply ● Glass beads provide overclamp protection
Benefits	<ul style="list-style-type: none"> ● Results in a high quality repair ● Saves Time ● Bonds and seals in one step ● Provides consistent bondline thickness

Typical Physical Properties

Container	Base	Accelerator
Base	Epoxy	Amine
Density lbs/Gallon (Appx.)	8.0	10.0
Color	Black	Butterscotch
Solids Content (Appx.)	100%	100%
Consistency	Viscous liquid	Viscous liquid
Mix Ratio by Weight	172 Parts	100 Parts
Mix Ratio by Volume	200 Parts	100 Parts

Product Uses

3M™ Automix™ Truck Line SMC/Fiberglass Repair Adhesive-90 is used to bond SMC and FRP (traditional fiberglass) to each other and to aluminum and steel. This adhesive is not intended to bond structural components of a vehicle. If doubt exists as to whether a particular component is structural, the component in question should be welded.

Performance Properties

Adhesive Characteristics

Work time: 90 min
 Handling time: 4 hrs (can be accelerated with heat)
 Cure time: 24 hrs (can be accelerated with heat)

Overlap Shear Adhesion

Adhesion to Various Substrates

Typical overlap shear strength of bonds with 10 to 12 mil bondlines are reported below as pounds per square inch (psi). All materials except aluminum, E-Coat, and two-part epoxy primed steel, were abraded with a 50 grit coated abrasive and solvent wiped with 3M™ General Purpose Adhesive Cleaner, P.N. 08984. Aluminum samples were abraded with a Scotch-Brite™ Rivet Cleaning Disc, P.N. 07410 and solvent wiped. E-Coat samples were solvent wiped. No extra surface preparation was performed on the epoxy primed steel. The bonds were allowed to cure for 7 days at 73°F and then tested on a Sintech tester at a joint separation rate of 0.5 inches/minute.

*all adhesion values in psi

<u>Substrate</u>	<u>-40°F</u>	<u>73°F</u>	<u>180°F</u>
0.057" Steel/0.057" Steel	4003(C)	3935(C)*	
0.036" Steel/0.036" Steel	3309(C)	2904(C)	1259(A)
0.035" E-Coat Primed Steel/0.035" E-Coat Primed Steel		3514(S)	
0.036" Galvanized Steel/0.036" Galvanized Steel		3008(C)	
Two-Part Epoxy Primed 0.036" Steel/Two-Part Epoxy Primed 0.036" Steel		2183	
0.062" Aluminum 6111/0.062" Aluminum 6111		3144(C)	
0.063" Aluminum 5754/0.063" Aluminum 5754		2152(A)	
0.057" Steel/0.062" Aluminum 6111		3795(C)	
FRP/FRP		1283(S)	
SMC/SMC		785(S)	
ABS (Acrylonitrile butadiene styrene)/ABS		942(S)	
Acrylic (Plexiglas)/Acrylic		345(A)	
Polycarbonate (Lexan)/Polycarbonate		733(S)	
PVC/PVC		578(A)	
HIPS (High Impact Polystyrene)/HIPS		122(A)	
Polystyrene/Polystyrene		116(A)	
Polypropylene/Polypropylene		435(A)	
High Density Polyethylene/HDPE		311(A)	
Low Density Polyethylene/LDPE		176(A)	
SBR/SBR		104(S)	

*(S)=Substrate Failure
 (A)=Adhesive Failure
 (C)=Cohesive Failure

Adhesion to Steel at Varying Bondline Thickness

*all adhesion values in psi

<u>Bondline Thickness</u>	<u>0.036" thick steel</u>	<u>0.057" thick steel</u>
10 mils	2690	3935
20 mils	2638	3863
32 mils	2653	3693
41 mils	2601	3510
47 mils	2432	3268

Rate of Strength Buildup at Various Temperatures (0.057" Steel)

*all adhesion values in psi

Cure Time	Cure Temperature				
	50°F	73°F	100°F	150°F	200°F
10 min				262	3061
20 min			22	1562	3707
40 min			32	3316	3786
1 hr			172	3569	
2 hr			1382	3833	
4 hr		78	2836		
5 hr		569			
6 hr		865			
8 hr	24	1756			
16 hr	592	2920			
1 day	1413	3273			
7 days	2774	3935			

Directions for Use

Directions for use included with each cartridge of adhesive.

Applications

3M™ Automix™ Truck Line SMC/Fiberglass Repair Adhesive - 90 can be used with PN 08280 MIXPAC dispenser and PN 08193 Mixing Nozzles. This adhesive has excellent adhesion to a wide variety of plastic and metal substrates.

Storage and Handling

Store at room temperature. Rotate stock on a "first-in-first-out" basis. When stored at the recommended conditions in original, unopened containers, this product has a shelf life of 12 months.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product. Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

Warranty and Limited Remedy

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