

# **SEM**® **FLEET LINE™ COMPOSITE ADHESIVE & REPAIR**

## TECHNICAL DATA SHEET

 Check local VOC regulations to ensure compliance of all products in your area.

### DESCRIPTION

A two-component, fiber-enriched epoxy used for bonding and/or cosmetic repair of composite plastics such as SMC, fiberglass and carbon fiber as well as Metton® and other rigid plastics.

### FEATURES

- One product for bonding and repair
- Exceptional bonding strength
- Outstanding sanding and feather edging
- Heat set options available
- Fiber-enriched formula helps control swelling and halos
- Easy to dispense and spread

### SUITABLE SUBSTRATES

- SMC
- Fiberglass
- Carbon Fiber
- Metton®
- Other rigid plastics

Metton is a registered trademark of Metton America, Inc.

### TYPICAL PROPERTIES

<b>Part:</b>	<b>Product Name:</b>	<b>Color:</b>	<b>Container:</b>
43110	Composite Adhesive & Repair	Neutral (white)	10 oz. Cartridge
<b>Working Time:</b>	35 minutes at 70°F (21°C)		
<b>Set Time:</b>	3 hours at 70°F (21°C)		
<b>Sand Time:</b>	Air dry: 3 hours at 70°F (21°C)		
	Paint Booth: 30 minutes at 140°F (60°C)		
	Heat Lamp: 10 minutes at 180°F (82°C)		
<b>Top Coat Time:</b>	Immediately after sanding		
<b>Lap shear at 70°F (21°C):</b>	2100+ ASTM D 1002		



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## HANDLING AND APPLICATION

### FOR REPAIRING:

#### PREPARATION:

Surfaces should be clean, dry and free of contamination. Clean surfaces to be repaired with **Plastic & Leather Prep**, **SEM Solve** or **XXX Universal Surface Cleaner**. Do not saturate exposed fibers.

**Note:** Use masking tape to mask any exposed fibers prior to cleaning and always use clean, lint-free towels when cleaning surfaces to avoid lint and particle contamination.

#### BACKSIDE REPAIR/REINFORCEMENT:

1. Reinforce large holes and damaged areas from the backside with **Fiberglass Cloth**. In such cases, sand with 36 – 80 grit paper or disc, 3 – 4 inches around damaged area.
2. Blow off dust with clean, dry, compressed air.
3. Remove cartridge tip and place **Composite Adhesive & Repair** cartridge into a **Fleet Line Manual Applicator** or **Fleet Line Pneumatic Applicator**. Equalize cartridge by dispensing product until both parts flow equally. Install **Static Mixer** and cut tip to desired bead size. Dispense 2 – 3 inches of test material to make certain color is uniform prior to applying to job.
4. Create a patch using a layer of **Fiberglass Cloth** sandwiched between two layers of **Composite Adhesive & Repair** detailed in steps 5 – 7.
5. Apply enough material to the backside repair to completely cover the repair area when spread with a plastic spreader.
6. Cut a piece of **Fiberglass Cloth** large enough to cover repair with at least 1 inch of overlap onto non-damaged surface. Place **Fiberglass Cloth** onto the backside of the repair using a plastic spreader and enough pressure to “seat” the cloth into the dispensed adhesive.
7. Apply enough material to the backside repair to completely cover the **Fiberglass Cloth**. Spread with a plastic spreader.
8. Allow the **Composite Adhesive & Repair** to set by either allowing to air dry, heat set with a curing lamp or heated paint booth.
9. Steps 4 – 8 can also be completed by using **Release Film** as a backer and creating the patch away from the repair area then applying the patch assembly onto the repair. Roll with the **Fiberglass Roller** to ensure adhesion.

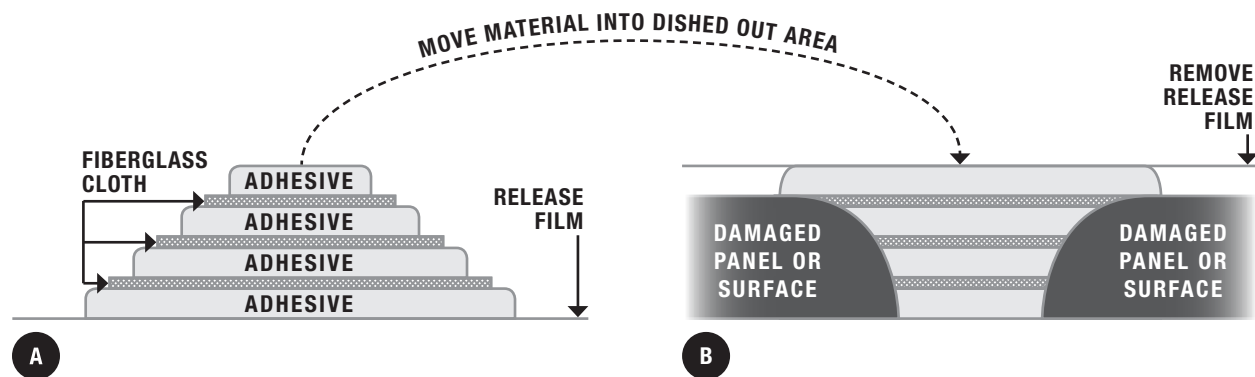
#### FRONTSIDE/COSMETIC REPAIR:

1. Sand with 80 grit paper 2 – 3 inches around damaged area.
2. “Dish” the damaged area 1 – 2 inches beyond the damage on all sides with a 36 grit grinding disc, making sure to round off any hard edges around the repair area.
3. Blow off dust with clean, dry, compressed air.
4. Remove cartridge tip and place **Composite Adhesive & Repair** cartridge into a **Fleet Line Manual Applicator** or **Fleet Line Pneumatic Applicator**. Equalize cartridge by dispensing product until both parts flow equally. Install **Static Mixer** and cut tip to desired bead size. Dispense 2 – 3 inches of test material to make certain color is uniform prior to applying to job.



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5. Construct a pyramid shaped patch matching the size of the dished area using progressively smaller, alternating layers of **Fiberglass Cloth** and **Composite Adhesive & Repair** onto a piece of **Release Film**. See illustration **A** below.
6. Place pyramid shaped patch into dished area and roll with **Fiberglass Roller** to press patch into repair and remove air pockets. See illustration **B** below.
7. Leave **Release Film** on surface and allow the **Composite Adhesive & Repair** to set by either allowing to air dry, heat set with a curing lamp or heated paint booth.
8. After **Composite Adhesive & Repair** has set and cooled completely from heat set option, remove **Release Film** and sand surface with 80 grit paper, then 180 grit paper.
9. Blow off dust with clean, dry, compressed air.
10. **Composite Adhesive & Repair** can be also be used as a skim coat, if necessary, to fill in any errant sand-scratches, grind marks or pin holes. **Carbo Fill+**<sup>™</sup> is also recommended for skim coating applications and does not require heat cure, allowing for a faster repair. Sand with 180 grit paper.
11. Blow off dust with clean, dry, compressed air, then prime and refinish per manufacturer's instructions.



## FOR BONDING:

### COMPOSITES OR OTHER RIGID PLASTICS

1. Clean surfaces to be bonded with **Plastic & Leather Prep**.
2. Sand with 80 grit paper and blow off to remove dust.
3. Re-clean surface with **Plastic & Leather Prep**, if necessary. Do not saturate exposed fibers.
4. Apply **Composite Adhesive & Repair** to both bonding surfaces. Use enough material to completely fill the joint when parts are clamped. To assure maximum bond strength, surfaces must be mated within adhesive's working time.

**Important:** Applications are intended for secondary (cosmetic) panels only. Structural components should never be repaired unless specified by the OEM.



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## MIXING:

It is recommended that **Composite Adhesive & Repair** be dispensed through a static mixer. It can also be dispensed onto a mixing board and mixed thoroughly by hand. When mixed properly, **Composite Adhesive & Repair** should achieve a uniform color. Heat build-up during and after mixing is normal.

## STATIC MIXERS:

Part:	Product Name:	For:	Container:
70011	Integral Nut Square Static Mixers	7 and 10 oz. cartridge	6 pack
70012	Integral Nut Square Static Mixers	7 and 10 oz. cartridge	50 pack

## CURING:

Parts should remain undisturbed during the interval of time between the material's working time and set time. Temperatures below 55°F (13°C) will slow the cure rate; above 85°F (29°C) will accelerate cure rate. At 70°F (21°C), **Composite Adhesive & Repair** sets in 3 hours and can be sanded in 3 – 4 hours. To accelerate cure time, heat set the repair for either 30 minutes @ 140°F (60°C) or 10 minutes @ 180°F (82°C).

## CLEANUP:

It is important to clean up excess adhesive from the work area and application equipment before it cures. Use appropriate cleaning materials compliant with VOC regulations in your area. Keep containers tightly closed after use.

## STORAGE:

**Composite Adhesive & Repair** should be stored in a cool, dry place with adequate ventilation away from heat, sparks and flames. The shelf life for **Composite Adhesive & Repair** is 2 years when stored at 40 – 77°F (4 – 25°C). Exposure above room temperature will reduce shelf life.



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## RELATED PRODUCTS:

Part:	Product Name:	Size:
38351	Plastic & Leather Prep	Gallon
38353	Plastic & Leather Prep	16 oz. Aerosol
38354	Plastic & Leather Prep	Cone Quart
38371	SEM Solve	Gallon
38373	SEM Solve	20 oz. Aerosol
38374	SEM Solve	Quart
38375	SEM Solve	5 Gallon
40542	Carbo Fill+™	16 oz. Tube
70011	Integral Nut Square Static Mixer	6 Pack
70012	Integral Nut Square Static Mixer	50 Pack
70025	Fiberglass Cloth	4" X 12' Roll
70026	Release Film	5" x 12' Roll
70027	Fiberglass Roller	1 Each
71139	Fleet Line™ Manual Applicator	1 Each
70059	Fleet Line™ Pneumatic Applicator	1 Each
77771	XXX Universal Surface Cleaner	Gallon
77774	XXX Universal Surface Cleaner	Quart

### Technical Consultation Service

Our Technical Staff is ready to assist you with any questions. You are invited to take advantage of our extensive experience, laboratory services and trained field service representatives. Call (800) 831-1122 for answers to your questions. Hours of operation are Monday through Thursday 8:00 am until 5:00 pm EST and on Friday 8:00 am until 4:30 pm EST.

#### Disclaimer:

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Users should review the Safety Data Sheet (SDS) and product label for the material to determine possible health hazards, appropriate engineering controls and precautions to be observed in using the material. Copies of the SDS and product label are available upon request.