



# DUAL-MIX™ STRUCTURAL IMPACT RESISTANT ADHESIVE

## TECHNICAL DATA SHEET

### DESCRIPTION

Dual-Mix Structural Impact Resistant Adhesive is an OEM recommended, two-component, epoxy-based adhesive for bonding structural and non-structural components where specified by the vehicle manufacturer.

### FEATURES

- OEM recommended
- Dual-Mix™ Forever Warranty
- Superior impact and peel strength
- Excellent corrosion resistance
- 60 minute working time
- Minimized down times with multiple heat cure options
- Spacer beads for consistent bond line thickness
- Rivet and weld bonding compatible

### SUITABLE SUBSTRATES

- Steel
- Aluminum
- SMC and other similar composites

### TYPICAL CURED PROPERTIES

| Part: | Product Name:                                 | Color: | Container:      |
|-------|---|--------|-----------------|
| 39757 | Dual-Mix Structural Impact Resistant Adhesive | Black  | 7 oz. Cartridge |

**Working time:** 60 minutes at 70°F (21°C)

**Set time:** 8 hours at 70°F (21°C)

45 minutes at 140°F (60°C)

15 minutes at 180°F (82°C)

**Top Coat time:** 8 hours at 70°F (21°C)

45 minutes at 140°F (60°C)

15 minutes at 180°F (82°C)

**Cure time:** 48 hours at 70°F (21°C)

2 hours at 140°F (60°C)

30 minutes at 180°F (82°C)

**Note:** All times given are based on substrate temperature, not air temperature. Check local VOC regulations to ensure compliance of all products in your area.



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## HANDLING AND APPLICATION



### PREPARATION:

**Note:** Prior to applying **Dual-Mix Structural Impact Resistant Adhesive**, vehicle temperature should be 70°F (21°C) for at least one hour.

Pre-fit all parts to ensure proper alignment and clearance. All means of fastening should be planned during the pre-fit including:

- Marking locations for Squeeze Type Resistance Spot Welds (STRSW), Self-Piercing Rivets or clamps
- Drilling holes for standard type rivets or MIG welds

Bonding surfaces should be clean, dry and free of contamination. Always follow vehicle manufacturer's recommendations on fastening requirements and removal of OEM coatings for bonding.

### STEEL AND ALUMINUM:

1. Clean surfaces to be bonded with **SEM Solve** or **XXX Universal Surface Cleaner**.
2. Grind each surface with a P80 grit grinding disc at a lower speed to maintain grinding marks. Do not grind at high speed.
3. Blow off with clean, dry, compressed air.
4. Re-clean surfaces with **SEM Solve** or **XXX Universal Surface Cleaner** only if necessary\*.

\* Re-cleaning the surface after grinding may pull lint from the towel and contaminate the bonding surface, resulting in poor adhesion.

**Note:** Always use lint-free towels when cleaning surfaces to avoid lint and particle contamination.

### SMC AND FIBERGLASS:

1. Clean surfaces to be bonded with **SEM Solve** or **XXX Universal Surface Cleaner**.
2. Grind each surface with a P80 grit grinding disc at a lower speed to maintain grinding marks. Do not grind at high speed.
3. Blow off with clean, dry, compressed air.
4. Re-clean surfaces with **SEM Solve** or **XXX Universal Surface Cleaner** only if necessary\*. Panel must be completely dry before applying adhesive. Do not saturate exposed fibers.

\* Re-cleaning the surface after grinding may pull lint from the towel and contaminate the bonding surface, resulting in poor adhesion.

**Note:** Always use lint-free towels when cleaning surfaces to avoid lint and particle contamination.

### MIXING:

Adhesive must be dispensed through a static mixer. Once mixed, **Dual-Mix Structural Impact Resistant Adhesive** should achieve a uniform color. Some heat build-up during and after mixing is normal.



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Place cartridge into **Universal Manual Applicator** or **Universal Pneumatic Applicator**. Remove retaining nut and red insert. To maintain product quality, replace after use. Prior to installing static mixer, equalize cartridge by dispensing product until both parts flow equally. Install static mixer. Dispense 2 – 3 inches of test material to make certain color is uniform prior to applying to job.



## APPLICATION:

Apply product to both bonding surfaces and tool with a spreader or acid brush covering all exposed bare metal. Use enough material to completely cover and fill the joint when bonded and clamped. Always follow step by step directions from the OEM and the instructions enclosed with cartridge. To assure maximum bond strength, surfaces must be mated within the adhesive's working time.

Fastening with STRSW, rivets or MIG must be performed during the adhesive's working time. Failure to do so will result in loss of adhesion and corrosion protection.

**Note:** **Dual-Mix Structural Impact Resistant Adhesive** is intended for full component replacement unless specified by the vehicle manufacturer. Always follow the vehicle manufacturer's recommendations for panel replacement. Failure to do so will void the adhesive's warranty.

## CURING:

Bonded parts should remain undisturbed between the material's working time and set time. After the set time is achieved, the material has reached handling strength and clamps or fasteners can be removed. Clamps or fasteners can be removed immediately after STRSW or riveting. Substrate temperatures below 70°F (21°C) will slow the cure; above 70°F (21°C) will accelerate cure rate. To enhance cure time, follow heat cure recommendations listed in the "Typical Cured Properties" section of this sheet.

## WELDING:

**Dual-Mix Structural Impact Resistant Adhesive** is versatile and can be used with traditional welding methods or Squeeze Type Resistance Spot Welding (STRSW) techniques during the adhesive's working time when following OEM recommendations. Remove excess adhesive prior to welding.

**Note:** Prior to welding, apply **Weld-Thru Primer** or **Copperweld™ Primer** on any areas where adhesive will not be present for corrosion protection. Allow primer to fully dry.

## CORROSION PROTECTION:

Apply **Rust Preventer Cavity Wax** to inner panel areas after 8 hours and replace any seam sealants to exposed joints prior to topcoating.

Existing rust should be removed and treated with **Rust Trap™** as per instructions.



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## DAMPENING MATERIAL:

**Dual-Mix Flexible Urethane Foam, Dual-Mix Rigid Urethane Foam and Dual-Mix Panel Vibration Control Material** can be used to replace the OEM dampening material found between the panels. Refer to product information for proper selection.

## TOPCOATING:

Bonded parts may be topcoated with most aftermarket finishes after the material's set time.



## CLEANUP:

Clean up excess adhesive from the work area and application equipment before it cures using the appropriate cleaning materials compliant with VOC regulations in your area. Do not saturate wet adhesive with cleaning material. Cured adhesive can only be removed mechanically by sanding or grinding.



## STORAGE:

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

## RELATED PRODUCTS:

| Part: | Product Name:                              | Size:           |
|-------|--|-----------------|
| 38371 | SEM Solve                                  | Gallon          |
| 38373 | SEM Solve                                  | 20 oz. Aerosol  |
| 38374 | SEM Solve                                  | Quart           |
| 38375 | SEM Solve                                  | 5 Gallon        |
| 39357 | Dual-Mix Flexible Urethane Foam*           | 7 oz. Cartridge |
| 39573 | Rust Preventer Cavity Wax*                 | 24 oz. Aerosol  |
| 39574 | Rust Preventer Cavity Wax*                 | Quart           |
| 39783 | Weld-Thru Primer                           | 16 oz. Aerosol  |
| 39977 | Dual-Mix Panel Vibration Control Material* | 7 oz. Cartridge |
| 39997 | Dual-Mix Rigid Urethane Foam*              | 7 oz. Cartridge |
| 40783 | Copperweld™ Primer*                        | 20 oz. Aerosol  |
| 40786 | Brushable Copperweld                       | 8 oz. Can       |
| 45501 | Rust Trap™ - Black                         | Gallon          |
| 45504 | Rust Trap - Black                          | Quart           |
| 45508 | Rust Trap - Black                          | Pint            |
| 45514 | Rust Trap - Silver                         | Quart           |



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|       |                                  |         |
|-------|----------------------------------|---------|
| 45518 | Rust Trap - Silver               | Pint    |
| 45594 | Rust Trap - Flattener            | Quart   |
| 45598 | Rust Trap - Flattener            | Pint    |
| 70011 | Integral Nut Square Static Mixer | 6 Pack  |
| 70012 | Integral Nut Square Static Mixer | 50 Pack |
| 70039 | Universal Pneumatic Applicator   | 1 Each  |
| 71119 | Universal Manual Applicator      | 1 Each  |
| 77771 | XXX Universal Surface Cleaner    | Gallon  |
| 77774 | XXX Universal Surface Cleaner    | Quart   |

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\*OEM recommended

### 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:

The information supplied in this document is for guidance only and is secondary to the OEM repair guidelines. Instructions should not be construed as a warranty. All implied warranties are expressly disclaimed. All users of the materials are responsible for assuring that it is suitable for their needs, environment and use. All data subject to change as SEM deems appropriate.

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.