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# ALUMINUM REPAIR & REFINISHING

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## FEATURED PROCEDURES

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BONDING & RIVET BONDING

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INNER PANEL REFINISHING

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2K SEAM SEALING

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SOUND DAMPENING

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# BONDING & RIVET BONDING

## 1 PREPARATION

Remove spot welds with a spot weld cutter; remove rivets by drilling or grinding. Remove damaged panel and straighten bent flanges with a hammer and dolly.

## 2 DRY FIT

Dry fit all panels before applying adhesive to ensure proper alignment and clearance. While dry fitting the panel during rivet bonding process, drill holes for replacement rivets or mark the location of self-piercing rivets per manufacturer's instructions.

## 3 CLEAN

Clean surfaces to be bonded with **SEM Solve** or **Zero VOC Surface Cleaner** per directions.

## 4 GRIND

Grind mating flanges with a 36 grit grinding disc at low speed to maintain grinding marks, removing any adhesive or protective coating, such as paint, e-coat or galvanized coating. Some manufacturers may recommend leaving the OEM e-coat on the surface of the new replacement panel if rivet bonding. If this is the case, omit grinding with 36 grit and instead, scuff with a red scuff pad.

## 5 RE-CLEAN

Blow off and re-clean surfaces with **SEM Solve** or **Zero VOC Surface Cleaner** if necessary. Always use lint-free towels when cleaning surfaces to avoid particle contamination. Bonding surfaces should be clean, dry and free of debris.

## 6 EQUALIZE

Equalize cartridge by dispensing product until both parts flow evenly. Install **Static Mixer**. Purge a small amount of material to ensure proper mix. Cut tip to desired size.

## 7 APPLICATION

Apply a 3/8" – 1/2" bead of **Multi-Purpose Panel Adhesive** or **Weld-Bond Adhesive** to both bonding surfaces and tool with a spreader or acid brush, covering all exposed bare metal. Use enough material to completely fill the joint when parts are clamped.

## 8 BONDING

Clamp panel into place. Wipe away excess material. To assure maximum bond strength, surfaces must be mated within the adhesive's working time. Do not over clamp.

## RIVET BONDING

Clamp panel into place. Install rivets per manufacturer's recommendations during adhesive's working time. Clamps may be removed after rivets have been installed. Wipe away excess material.

Temperatures below 55°F (13°C) will slow the cure rate

Temperatures above 85°F (29°C) will accelerate the cure rate.

To minimize cure time, heat to 120° – 140°F (49° – 60°C) for 1 hour.

# INNER PANEL REFINISHING

## 1



## CLEAN

Clean surface with **SEM Solve** or **Zero VOC Surface Cleaner**.

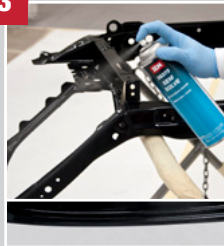
## 2



## SAND

Sand with 320 grit sandpaper or scuff with a gray scuff pad.

## 3



## RE-CLEAN

Re-clean surface with **SEM Solve** or **Zero VOC Surface Cleaner**.

Use a clean tack rag to remove any dust or contaminants from the surface.

## 4



## APPLY EZ COAT™

Shake aerosol for a minimum of 1 minute.

Apply 2 – 3 medium wet coats allowing 5 – 10 minutes flash time between coats.

If using **Factory Pack** to topcoat, apply immediately after **Ez Coat** flashes. If using any other refinishing product, allow **Ez Coat** 30 minutes to dry.

Because of its size, a radiator support will flash as you are finishing the part. For smaller parts, be sure to allow adequate flash time.

## 5



## APPLY FACTORY PACK™

Use a clean tack rag to remove any dust.

Shake aerosol for a minimum of 1 minute.

Apply 2 – 3 medium coats of **Factory Pack** or until hiding is achieved. Allow 2 – 4 minutes flash time between coats.

If using **1K HS Clear**, apply immediately after **Factory Pack** flashes.

## 6



## APPLY 1K HS CLEAR

Use a clean tack rag to remove any dust.

Shake aerosol for a minimum of 1 minute.

Apply 2 full coats or 3 medium coats allowing 3 – 5 minutes flash time between coats.

Allow 1 hour dry time after final coat before handling.

# 2K SEAM SEALING

1



## CLEAN

Clean joints and seams thoroughly with **SEM Solve** or **Zero VOC Surface Cleaner**.

2



## SAND & RE-CLEAN

### FOR BARE METAL

Sand bare metal with 80 grit sandpaper.

### FOR PRIMED SURFACE

Sand primed surface with 400 grit sandpaper or gray scuff pad. Re-clean with **SEM Solve** or **Zero VOC Surface Cleaner**. Blow off and tack clean to remove lint and dust.

3



## EQUALIZE

Equalize cartridge by dispensing product until both parts flow evenly. Install **Static Mixer**. Purge a small amount of material to ensure proper mix. Cut tip to desired size.

4



## APPLY DTM OR TO PRIMER

All **SEM** standard two-component seam sealers can be applied direct-to-metal, over cured and sanded epoxy primer, or direct-to-metal 2K urethane primer. Never apply over a self etch primer. Always apply over a primer when filling all drip rails of vehicles.



## FOR DRIP RAILS

Use **High-Build Self Leveling Seam Sealer** with a **Versa-Tip** for applications where a thicker viscosity is needed such as sloped/vertical surfaces. Dispense into the center of channel and allow product to flow. Keep tip submerged to minimize air bubbles.



## AIR BUBBLE REMOVAL

Immediately after application, a heat gun can be used to remove any air bubbles that become entrapped. With a steady motion, sweep the heat gun across surface of **Self Leveling Seam Sealer** or **High-Build Self Leveling Seam Sealer** at a distance of 2" – 6".



## PAINTING

All **SEM** standard two-component seam sealers are paintable immediately with most solvent based paint systems.

# SOUND DAMPENING

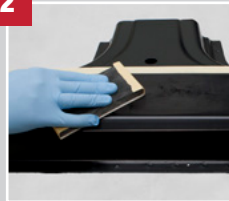
1



## CLEAN

Clean surface thoroughly with **SEM Solve** or **Zero VOC Surface Cleaner**.

2



## SAND & RE-CLEAN

Sand primed surface with 180 grit sandpaper or sand bare metal surface with 80 grit sandpaper.

Blow off and re-clean with **SEM Solve** or **Zero VOC Surface Cleaner**, then tack clean to remove lint and dust.

Do not apply **Sound & Seal Sprayable Coating** directly over a self etching primer.

3



## EQUALIZE

Place cartridge into the **Universal Pneumatic Applicator** and equalize cartridge until both sides dispense equally.

Attach **Quick Spray System Static Mixer** to cartridge.

Attach **Quick Spray System**. Do not cut the tip of the static mixer to modify the spray out. Modify the air pressure to adjust the spray.

4



## APPLY

Apply to necessary areas, duplicating existing texture. There is no need to apply in coats.



## 70101 ROUND AIR ASSEMBLY:

For spraying sound dampening pads and seams. Spraying at a distance of 1" allows the user to spray a consistent bead seen on shock towers and rear body pans.



## 70102 FLAT AIR ASSEMBLY:

Used to match rocker panels on Honda Civics and Accords. Sprays a directional pattern of about 3" in width. Turning the gun sideways allows for the creation of a built-up edge.

# PREP PRODUCTS



## SEM SOLVE

A virgin solvent blend to clean panels prior to repair or refinish.

- Removes wax, grease and solvent soluble contaminants
- Leaves no residue

Part	Size
38371	Gallon
38373	20 oz. Aerosol
38374	Square Quart
38378	5 Gallon



## Zero VOC Surface Cleaner

A water-based cleaner designed to eliminate surface contaminants prior to refinishing.

- Removes dirt, oil, grease and silicone
- VOC compliant everywhere
- Eliminates static for better blends
- Non-flammable
- Environmentally friendly

Part	Size
40401	Gallon
40404	Quart

# ADHESIVES



## Dual-Mix™ Multi-Purpose Panel Adhesive

A two-component epoxy for panel bonding steel, aluminum, SMC and fiberglass.

- **Dual-Mix™ Forever Warranty**
- Superior impact and peel strength
- Excellent corrosion resistance
- Glass beads for consistent bond line thickness
- Non-sag formula
- 90 minute working time

Part	Size
39747	7 oz. Cartridge



## Dual-Mix™ Weld-Bond Adhesive

A two-component, acrylic adhesive formulated to bond steel and aluminum surfaces without the use of an external primer.

- **Dual-Mix™ Forever Warranty**
- Superior impact and peel strength
- Glass beads for consistent bond line thickness
- Excellent environmental resistance
- 60 minute working time

Part	Size
39537	7 oz. Cartridge



## Dual-Mix™ Door Skin & SMC Adhesive

A two-component epoxy that quickly bonds any combination of steel, aluminum, SMC and fiberglass.

- **Dual-Mix™ Forever Warranty**
- Non-sag formulation
- Excellent corrosion protection
- Bonds multiple substrates
- 30 minute working time

Part	Size
39337	7 oz. Cartridge



## Dual-Mix™ Patch Panel Adhesive

A two-component, acrylic adhesive for quickly bonding metal panels without the use of an external primer.

- **Dual-Mix™ Forever Warranty**
- Superior impact and peel strength
- Non-sag formula
- Excellent corrosion resistance
- 10 minute working time

Part	Size
39897	7 oz. Cartridge



## Dual-Mix™ Non-Sag Fast Set Adhesive

A two-component epoxy based adhesive for fast bonds on most surfaces.

- **Dual-Mix™ Forever Warranty**
- Superior adhesion
- Bonds multiple substrates
- 3 minute working time

Part	Size
39907	7 oz. Cartridge



## Dual-Mix™ Quick Set 20

A fast, two-component, opaque, urethane adhesive designed for bumper tab repair and bonding most small plastic, steel and aluminum parts.

**20 SECOND WORKING TIME**

## Dual-Mix™ Quick Set 50

A fast, two-component, black, urethane adhesive designed for automotive plastic repair and bonding most small plastic, steel and aluminum parts.

**50 SECOND WORKING TIME**

## Dual-Mix™ Quick Set 180

A two-component, general purpose, black, urethane adhesive with a three minute working time designed for repair and bonding of most small to medium plastic, steel, aluminum, glass, SMC and fiberglass parts.

**3 MINUTE WORKING TIME**



- **Dual-Mix™ Forever Warranty**
- For bonding most small to medium plastic, metal and aluminum parts
- High strength and sandable
- Non-sag formula

Part	Product	Size
40202	Quick Set 20	1.7 oz. Cartridge
40207	Quick Set 20	7 oz. Cartridge
40502	Quick Set 50	1.7 oz. Cartridge
40507	Quick Set 50	7 oz. Cartridge
41807	Quick Set 180	7 oz. Cartridge



### Insta-Bond 2K Kit

This kit contains an acrylic adhesive and accelerator for instant bonding of small parts.

- Holds torn plastic together during repair
- Provides high strength bonds
- Also for use on vinyl, metal and glass
- Accelerator creates instant bond

Part	Product	Size
39310	Kit	3 oz.
39311	Insta-Bond Adhesive	1 oz.
39322	Insta-Bond Accelerator	1 oz.



### Mini-Max™ General Purpose Adhesive

A two-component, epoxy based adhesive for fast bonds on most surfaces.

### Mini-Max™ Clear Fast Set Adhesive

A two-component, clear epoxy for an invisible bond on plastic, metal, fiberglass and wood.

Part	Product	Size
68432	General Purpose Adhesive	1 oz.
68442	Clear Fast Set Adhesive	1 oz.

## SOUND DAMPENING



### Dual-Mix™ Flexible Urethane Foam

A two-component, black foam that duplicates OEM foams used for sound dampening.

- Dual-Mix™ Forever Warranty
- Excellent sound dampening qualities
- Stops panel flutter
- 10x volume expansion
- Resists shrinking
- Working time of 15 seconds

Part	Size
39357	7 oz. Cartridge



### Dual-Mix™ Rigid Urethane Foam

A two-component, urethane, expanding foam for filling pillars, posts, and box sections.

- Dual-Mix™ Forever Warranty
- Meets UL 94HB flammability tests
- Restores crash parts to OEM condition
- Superior expansion
- Working time 45 seconds

Part	Size
39997	7 oz. Cartridge



### Dual-Mix™ Panel Vibration Control Material

A two-component, epoxy/urethane blend for reducing noise and vibration on roof skins and intrusion beams.

- Dual-Mix™ Forever Warranty
- Excellent sag resistance
- Reduces noise and vibration
- Protects against corrosion
- Superior flexibility
- Working time of 1 hour

Part	Size
39977	7 oz. Cartridge

## SEAM SEALING



### Dual-Mix™ Seam Sealer

A two-component, epoxy sealer for sealing of interior or exterior seams, joints and voids.

- Dual-Mix™ Forever Warranty
- Direct to metal
- Paintable Immediately
- Will not shrink, harden or crack
- Non-sag formula duplicates OEM sealers
- Fast cure increases production
- Sprayable for additional versatility

Part	Size
39377	7 oz. Cartridge



### Dual-Mix™ Self Leveling Seam Sealer

A two-component, low viscosity epoxy for use on drip rails, roof and trunk seams.

- Dual-Mix™ Forever Warranty
- Direct to metal on non-flexing roof skins
- Paintable in 15 minutes
- Will not shrink, harden or crack
- Permanently flexible

Part	Size
39387	7 oz. Cartridge



### Dual-Mix™ High-Build Self Leveling Seam Sealer

A two-component, high viscosity epoxy ideal for use on roof seams, drip rails and trunk seams.

- Dual-Mix™ Forever Warranty
- Direct to metal on non-flexing roof skins
- Paintable in 15 minutes
- Will not shrink, harden or crack
- Permanently flexible

Part	Size
39777	7 oz. Cartridge



### Dual-Mix™ Sound & Seal Sprayable Coating

A unique, sprayable, epoxy/urethane blend for replacing OEM coatings under rocker panels, in trunks, and on floor sections and frame rails.

- Dual-Mix™ Forever Warranty
- Will not shrink, harden or crack
- Retains flexibility
- Excellent adhesion to properly prepped surfaces
- Paintable in 30 minutes

Part	Size
40977	7 oz. Cartridge



## 1K Sprayable Seam Sealer

High performance, MSP seam sealers for duplicating OEM sprayed seams and sound dampening pads.

- Direct to metal
- Paintable immediately
- Excellent adhesion
- Remains flexible
- No shrinking or cracking
- Working time of 20 minutes
- Color variety to match OEM sealers

Part	Color
29462	White
29472	Gray
29482	Beige
29492	Black



## 1K Seam Sealer

Versatile single-component, MSP sealer for interior or exterior seams, joints and voids.

- Direct to metal
- Paintable immediately
- Non-sag formula
- Remains flexible without shrinking or cracking
- Color matches many OEM sealers

Part	Color
29362	White
29372	Gray
29382	Beige
29392	Black



## 2K Seam Sealer

Two-component epoxy sealers for use on interior or exterior seams, joints and voids.

- Direct to metal
- Paintable immediately
- Excellent adhesion to bare metal or primed surfaces
- Will not shrink, harden or crack
- Non-sag formula duplicates OEM sealers
- Sprayable for additional versatility

Part	Product
39477	Beige Seam Sealer
40377	Heavy Bodied Black Seam Sealer
40477	Heavy Bodied White Seam Sealer

# FILLERS & GLAZES



## Carbo Fill+™

An enriched filler with exceptional qualities for repairing SMC, FRP, HPA and PPO/PA, aluminum and metal.

- Carbon fiber for added strength
- Prevents swelling
- Resists staining and shrinkage
- Helps eliminate halo effect
- Easy to sand
- Excellent corrosion control

Part	Size
40542	16 oz. Tube



## Metal Bite™

A two-component, polyester finishing glaze that quickly fills sand scratches and other minor imperfections.

- Fast drying to a tack-free finish
- Seals the repair area and prevents staining
- Exceptional sanding and feather edge
- Outstanding adhesion
- Use on aluminum, steel, SMC and fiberglass

Part	Size
39592	24 oz. Tube

# PRIMERS



## World Class™ DTM Primer

A VOC compliant, two-component epoxy that provides bare metal adhesion and filling in one product.

- 2.1 VOC compliant
- 4:1 Mix
- Outstanding adhesion on steel, aluminum and fiberglass
- Excellent corrosion control
- Builds quickly, sands easily
- Excellent color holdout

Part	Product	Size
50121	DTM Primer	Gallon
50124	DTM Primer	Quart
50134	DTM Primer Activator	Quart
50136	DTM Primer Activator	1/2 pint



## World Class™ Acrylic Primer Surfacer

A VOC compliant coating for quick and easy priming of spots or complete panels.

- 2.1 VOC compliant
- 1:1 Mix with urethane reducer
- Excellent filling properties
- Sands quickly

Part	Size
50101	Gallon
50104	Quart



## World Class™ HS Urethane Primer

A premium, high build, two-component, urethane primer formulated for use on automotive substrates.

- 4.2 VOC compliant
- 4:1 Mix
- Outstanding adhesion
- Excellent filling properties
- Sands quickly
- Excellent color holdout
- Available in gallons and quarts

Part	Product	Size
50151	HS Urethane Primer	Gallon
50154	HS Urethane Primer	Quart
50444	Extra Fast Activator	Quart
50446	Extra Fast Activator	1/2 pint
50454	Fast Activator	Quart
50456	Fast Activator	1/2 pint
50464	Medium Activator	Quart
50466	Medium Activator	1/2 pint
50474	Slow Activator	Quart
50476	Slow Activator	1/2 pint



### Metalock™ DTM High Build Primer

A two-component epoxy primer for use on metal, aluminum, SMC and fiberglass.

- Superior adhesion
- Outstanding corrosion protection
- Exceptional filling properties
- High build formula
- Sealer mixing option
- Easy to sand

Part	Product	Size
ML010	Kit	5 Quart Kit
ML014	Primer	Quart
MLH16	Hardener	1/2 Pint



### Ez Coat™

A unique, direct-to-metal coating that matches standard factory primers and e-coat colors.

- Duplicates factory appearance
- Direct-to-metal
- Quick curing and hiding
- Available in 7 popular OEM colors
- Paintable with most automotive base coats
- Excellent corrosion control

Part	Color	Part	Color
62213	Black	62253	Tan
62223	Olive Green	62263	Olive Brown
62233	Light Green	62273	White
62243	Gray		



### Self Etching Primer

A first step coating that provides excellent adhesion to bare substrates.

- Excellent adhesion to steel, aluminum and stainless steel
- Quick drying
- Black, gray and green colors available
- Comes in gallons, quarts and aerosols
- Bulk products VOC compliant

Part	Color	Size
39673	Black	20 oz. Aerosol
39683	Gray	20 oz. Aerosol
39693	Green	20 oz. Aerosol

Bulk sizes available in quarts and gallons



### High Build Primer Surfacer

An elastomeric coating for priming automotive steel, aluminum, urethane and plastics.

- Provides superior adhesion
- Excellent filling properties
- Works on flexible or rigid substrates
- Easy to sand
- Topcoat with most refinish material

Part	Color	Size
42003	Black	20 oz. Aerosol
42013	Gray	20 oz. Aerosol
42023	Beige	20 oz. Aerosol
42033	Rose	20 oz. Aerosol
42043	White	20 oz. Aerosol

## UNDERCOATINGS



### Undercoating & Low VOC Undercoating

For corrosion protection, chip resistance and sound dampening on automotive frames, wheel wells and undercarriage areas.

- Asphalt based aerosol coatings
- Uniform final appearance
- Excellent adhesion
- Economical

Part	Product	Size
39463	Regular	24 oz. Aerosol
40463	Low VOC	24 oz. Aerosol



### Rubberized Undercoating & Low VOC Rubberized Undercoating

Premium, paintable, textured coatings for sound dampening, chip resistance and corrosion protection.

- Asphalt free
- Uniform final appearance
- Paintable without bleed through
- Fast-drying
- Aerosols include straw for tight spots

Part	Product	Size
39523	Regular	24 oz. Aerosol
40523	Low VOC	24 oz. Aerosol
40524	Low VOC	Cone Quart

## TOP COATINGS



### Factory Pack™

A unique, time-saving line of basecoat colors for use on jambs, cut-ins, small accessories, and touch ups.

- Lower material cost
- Reduces booth bottlenecks
- Increases production
- Superior adhesion, flexibility and hiding
- Compliant everywhere
- Aerosol matched to OEM standards
- Should be clear coated



### Trim Black

Acrylic coatings formulated to restore the OEM finish on automotive trim components. For use on plastic, steel, aluminum, stainless steel and chrome.

- Excellent adhesion and durability
- No primer required
- Matches OEM appearance
- Retains flexibility
- Great coverage
- Professional results



### Multimax™

A multi-purpose enamel for exterior or interior use on steel, wood, fiberglass and aluminum.

- Outstanding coverage
- Excellent filling properties
- Durable, fast drying finish
- Great adhesion
- Professional finish

Discover various automotive chemicals in our online store.