



# Panel Bonding Adhesive

## 08116

Technical Data

August 2017

### Product Description

3M™ Panel Bonding Adhesive (PN 08116) is a two-part epoxy designed to bond non-structural outer body sheet metal such as, but not limited to, quarter panels, roof panels, van sides, box sides and door skins. This adhesive meets the following OEM (Original Equipment Manufacturer) specifications:

- *General Motors GM6449G Automotive (Metallic) Panel Bonding Performance Guidelines For After Market Service Use*
- *Chrysler MS-CD507 Structural Adhesive - Two Component - Room Temperature Cure - Metal Bonding Applications*

### Features

- Meets GM and Chrysler specifications
- Corrosion Inhibiting Formula
- 200 ml Duo-Syringe Cartridge System

### Typical Physical Properties

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

Container	200 ml Duo-Pak Cartridge	
Base	Part B (base) Epoxy	Part A (accelerator) Curative
Density lbs/Gallon (Appx.)	Part B - 8.0	Part A - 9.3
Color	Part B - Black	Part A - Tan/Amber
Viscosity (CPS) Brookfield Viscometer	Part B - Viscous Liquid	Part A - Viscous Liquid
Solids Content (Appx.)	100%	100%
Consistency	Paste	Paste

### Product Uses

Bonding steel, aluminum, SMC and FRP (fiberglass) to themselves or each other. Use with the following applicators: PN08117 (manual), PN 09930 (pneumatic). 3M™ Mixing Nozzle, PN 08193 (6/bag), PN 08194 (50/box).

**For professional use only. Not intended for retail sale.**

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## Typical Performance Properties

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

The following times have been determined with ambient air temperature and substrate temperature @ 70°F and are considered typical values.

**WORK TIME:**

90-120 minutes

**CLAMP TIME**

6 hours

**CURE TIME:**

24 hours

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## Directions for Use

### SURFACE PREPARATION:

1. Wash surface with soap and water to remove water soluble contaminants. Follow the soap and water wash with an appropriate VOC compliant product for removal of surface contaminants.
2. Remove all rust, primer and paint from the areas to be bonded or welded using a Scotch-Brite™ Clean & Strip Disc or 3M grade 50 Grinding Disc.
3. Straighten all metal, and “dry-fit” the parts.
4. Clamp the part in place and check for fit and alignment.
5. Remove the panel from the vehicle. All areas to be welded should be coated with 3M™ Weld-Thru II Coating (PN 05917) according to the directions on the can. Adhesive should not be applied to these areas.

### PRODUCT PREPARATION:

6. Place an adhesive cartridge in the applicator gun.
7. Remove the retaining collar and plug from the end of the cartridge. Discard plug, but save the retaining collar.
8. Before attaching a nozzle, “equalize” the cartridge by dispensing just enough product to be sure that both parts A and B are present at the outlet.
9. Attach a 3M™ Static Mixing Nozzle to the cartridge and lock in place with the retaining collar.
10. Dispense a small amount of material through the mixing nozzle onto a disposable surface and discard.

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## Directions for Use (continued)

### REPAIR PROCESS:

11. Apply an adhesive bead to all bare metal surfaces of both pieces to be bonded. Using a plastic spreader or acid brush, tool out the adhesive to cover all bare metal surfaces.
12. Apply a 1/8" diameter adhesive bead approximately 1/4" from the inside edge of the replacement panel.
  - **Quarter Panels:** Adhesive should be applied to the lower edge, the wheel opening, the door jamb areas of the quarter, and at the factory seam of the sail panel. 3M suggests that the rear vertical portion of a quarter panel should be welded. It is acceptable to bond the rear vertical portion of a quarter panel, if recommended by the OEM. Additionally, most OEM's only recommend full panel replacement. Should you perform a belt cut on a sail panel, 3M recommends welding the belt cut to ensure optimal cosmetic appearance. All areas to be welded should be sprayed with 3M™ Weld-Thru II (PN 05917). Do not apply adhesive to these areas.
  - **Roof Panels:** Adhesive should be applied around the perimeter of the roof panel. To replace the factory-applied NVH foam/spacer between the roof bow and the roof panel, use one of the following: 3M™ Urethane Seam Sealer (PN 08360, PN 08361 or PN 08364), 3M™ MSP Seam Sealer (PN 08369 or PN 08370), or 3M™ NVH Dampening Material (PN 04274) to the roof bows as needed.
  - **Door Skins:** Adhesive should be applied to the hem flange area. To replace the factory-applied NVH foam/spacer between the intrusion beam/s and the door skin, use one of the following: 3M™ Urethane Seam Sealer (PN 08360, PN08361 or PN 08364), 3M™ MSP Seam Sealer (PN 08369 or PN 08370), or 3M™ NVH Dampening Material (PN 04274) to the intrusion beam/s as needed.
13. Clamp the panel in its proper position.
14. Tool any adhesive "squeeze out" to seal the outside of the seam all along the bonded edge of the panel.
  - **Caution:** The adhesive is combustible. Keep any MIG welding a minimum of two inches from the adhesive. As with any welding operation, keep the appropriate fire extinguisher within reach, and be alert to any smoke or flame that may be present. **Resistance spot welding through uncured adhesive is acceptable.**
15. Spray the inside of quarter panels, interior cavities, and any welded seams with 3M™ Rust Fighter-I (PN 08891 or PN 08892).
16. Clamps may be removed after six hours at 73°F. Parts will need to remain clamped longer if the temperature is below 73°F and/or if there is any tension on the part. The cure time may be accelerated by applying heat with a heat gun or lamps.
17. Allow 24 hours at a minimum of 73°F before returning vehicle to service.

CLEAN-UP: Unmixed material may be cleaned from most surfaces with an appropriate VOC compliant product.

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### Storage and Handling

When stored at the recommended conditions in original, unopened containers, this product has a shelf life of 24 months from the date of manufacture. Store at room temperature. Rotate stock on a “first-in-first-out” basis.

**After use, leave the mix nozzle in place to seal the cartridge.**

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### Precautionary Information

Before using this product, please reference Product Label and/or Safety Data Sheet for Health and Safety Information. Note: Laws controlling the acceptable amounts of Volatile Organic Compounds (VOC's) vary by state, and in some cases by locality. For surface preparation and clean-up activities, consult federal, state and local regulations regarding use of products containing VOCs in your area.

**IMPORTANT NOTE:** There are many factors that can affect an individual repair, so the technician and repair facility need to evaluate each specific application and repair process and determine what's appropriate. 3M recommends referring to relevant vehicle repair and OEM guidelines prior to starting all repairs.

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### Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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### Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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### Limitation of Liability

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