# Fusor® 208B Panel Bonding Adhesive (Slow)

Technical Data Sheet

Fusor® 208B adhesive is a two-component, epoxy-based panel bonding adhesive offering low odor during application and tack-free when cured. Fusor 208B adhesive can be used for panel bonding, weld bonding, and rivet bonding of large steel, aluminum and SMC/FRP body panels, such as quarter panels, rear body panels, floor pans and roof skins.

## Features and Benefits:

**Convenient** – emits low odor during application; cures to a tack-free surface, allowing panels to be painted and sanded with no need to remove adhesive squeeze out.

**Versatile** – bonds plastic, e-coat and bare metals, including steel, aluminum, FRP and SMC; weld through with minimal burn back.

**Environmentally Resistant** – provides excellent corrosion protection to weathering.

**Easy to Finish** - can be tooled, wiped clean, sanded and/or painted; offers immediate paint time.

## Application:

**Prepare** – Follow the vehicle manufacturer's guidelines regarding the fastening of the replacement panel (welding, mechanical fasteners, or bond only) and their position on the removal of any metal coatings (zinc or aluminum coatings).

Remove existing adhesive and e-coating from metal flange surfaces to which adhesive will be applied. Grind the surface of all mating flanges (not greater than 1 inch [25.4 mm]) using an 80-grit disk or finer.

Pre-fit the new panel to ensure proper alignment and plan the mechanical fastening (STRSW welds or rivets) and clamping locations for the final installation. If pull rivets or solid rivets are being used, then the holes should be drilled at this time. Wipe bonding surface with solvent (acetone, heptanes, isopropyl alcohol, MEK, etc.), leaving no residue.

**Apply** – Load the cartridge into the dispensing gun and remove the end caps. Level the plungers by expelling a small amount of adhesive to ensure that adhesive is coming out of both sides of the cartridge. Attach mixing tip and dispense a small amount of adhesive to verify the material is evenly mixed and the color is consistent.

Apply a small amount of adhesive to the bonding flange of both panels. Quickly spread adhesive over all bare metal, as a priming operation. Apply a 1/4 to 3/8 inch (6.4 to 9.5 mm) bead of adhesive to the prepared mating surfaces.

| Typical Properties* | |
|---|---|
| Appearance | Gray Paste |
| Base Chemistry | Epoxy |
| Work Time | 90 minutes @ 70°F (21°C) |
| Clamp Time | 4 hours @ 70°F (21°C);<br>30 minutes @ 140°F (60°C) |
| Paint Time | Immediately |
| Cure Time | 24 hours @ 70°F (21°C);<br>1 hour @ 140°F (60°C) |

*Data is typical and not to be used for specification purposes.

Secure the panel using clamps. Mating surfaces must be held in contact during the curing process. The glass beads in the adhesive will prevent over clamping. Apply screws or rivets in hard-to-clamp areas. After the panel has been positioned, do not pull it away from the vehicle. If repositioning is necessary, slide the panels against one another. This maintains contact between the two surfaces.

Note: Various applications, cleaners/solvents and coatings may not be compatible with this product and should be tested by the user before proceeding with intended repair procedure.

**Finish** – Weld the panel (STRSW) or install the appropriate mechanical fasteners (rivets) in their respective locations. Once fastened, remove any remaining clamps or temporary fasteners. If a bond-only application, the clamps/fasteners may be removed after 4 hours at 70°F (21°C), or 30 minutes at 140°F (60°C).

Adhesive squeeze out may be tooled, or removed and surface wiped clean with a solvent. Adhesive may be painted immediately. Check paint system compatibility before proceeding.

Cure requires 24 hours at room temperature (70°F [21°C]). Cure rate can be accelerated by applying modest heat [140°F (60°C)] for 1 hour.

## Shelf Life/Storage

Shelf life is 24 months from date of manufacture when stored at 75°F (24°C) in original, unopened container.

## Cautionary Information:

Before using this or any Parker LORD product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

*For industrial/commercial use only.* Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

## Bond Performance*

**Lap Shear @ Room Temperature (ASTM D 1002 & ASTM D 5868)**

| Substrates | 0.032" CRS | 0.060" CRS | ECPS | EGS | EPS |
|---|---|---|---|---|---|
| Results | 2379 psi (16.4 MPa) | 3042 psi (21.0 MPa) | 2350 psi (16.2 MPa) | 1916 psi (13.2 MPa) | 1508 psi (10.4 MPa) |
| Failure Mode | C | C | C | C | P |

| Substrates | HDG | AL 6111 | AL 6063T6 | FRP | SMC |
|---|---|---|---|---|---|
| Results | 1940 psi (13.4 MPa) | 2540 psi (17.5 MPa) | 2491 psi (17.2 MPa) | 653 psi (4.5 MPa) | 589 psi (4.1 MPa) |
| Failure Mode | C | C | C | FT | FT |

**Lap Shear @ 180°F (82°C) (ASTM D 1002)**

| Substrates | 0.060" CRS |
|---|---|
| Results | 1003 psi (6.9 MPa) |
| Failure Mode | C |

**Lap Shear @ -40°F (-40°C) (ASTM D 1002)**

| Substrates | 0.032" CRS | 0.060" CRS |
|---|---|---|
| Results | 2605 psi (18.0 MPa) | 3720 psi (25.6 MPa) |
| Failure Mode | C | C |

**Lap Shear after 500 hours Salt Spray (ASTM B 117)**

| Substrates | 0.060" CRS | EGS | HDG | AL 6063T6 |
|---|---|---|---|---|
| Results | 2919 psi (20.1 MPa) | 1910 psi (13.2 MPa) | 1912 psi (13.2 MPa) | 2634 psi (18.2 MPa) |
| Failure Mode | C | C | C | C |

**Impact Wedge Peel (ISO 11343)**

| Substrates | 0.032" CRS |
|---|---|
| Results | 48.5 pli (8.5 N/mm) |
| Failure Mode | C |

| Substrate | Surface Treatment |
|---|---|
| Cold Rolled Steel (CRS), 0.032" and 0.060" thick | 80-grit grind |
| E-coat Primed Steel (ECPS), 0.032" thick | Scuffed |
| Hot Dipped Galvanized Steel (HDG), 0.033" thick | 80-grit grind |
| Electro Galvanized Steel (EGS), 0.031" thick | 80-grit grind |
| 2K Epoxy Primed Steel (EPS), 0.032" thick | Scufffed |
| Aluminum (AL) 6111, 0.038" thick) | 80-grit grind |
| Aluminum (AL) 6063T6, 0.063" thick | 80-grit grind |
| Fiber Reinforced Plastic (FRP) | 80-grit grind |
| Sheet Molded Compound (SMC) | 80-grit grind |

| Bonded Parameters | Bond Area | Bondline Thickness | Cure | Mix Ratio |
|---|---|---|---|---|
| Metal Lap Shears (ASTM D1002) | 1.0"x0.5" | 0.010" | 24 hr @ RT | 1:1 by Volume |
| Metal Lap Shears (ASTM D1002) | 1.0"x1.0" | 0.010" | 24 hr @ RT | 1:1 by Volume |

| Failure Mode Definition | Abbreviation |
|---|---|
| Cohesive Failure | C |
| Fiber Tear | FT |
| Primer to Substrate Failure | P |

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# Fusor® Repair Products Lifetime Guarantee*

LORD Assembly & Protection Solutions Division of Parker-Hannifin Corporation ("Parker LORD") guarantees to the user that Fusor® Repair Products (adhesives, primers, seam sealers and foams only), when used in strict accordance with Parker LORD application and use instructions, will provide a durable repair for the life of the vehicle per the product's technical data sheet. The user is solely responsible for determining the Fusor product and application method for the repair. Application and product guidance can be found on Fusor.com.

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This guarantee shall only apply to the above referenced Fusor products sold by Parker LORD on or after January 1, 2001.

Fusor Metal Bonding Adhesives shall only be used for the adhesive-only bonding (no welds or rivets) of metal to metal assemblies (steel or aluminum) in full or partial panel replacements of door skins, roof skins, quarter panels, rear body panels and other outer body sheet metal where approved by the vehicle manufacturer.

Fusor products shall not be used for adhesive-only bonding of any structural component unless specifically recommended by the vehicle manufacturer. Structural panels must be replaced in strict compliance with vehicle manufacturer guidelines. If in doubt as to what is a structural component or the proper installation method, contact the vehicle manufacturer. Further, any Fusor products used in marine composite repair, such as with personal water craft and the like, shall be limited to repairs above the water line.

If you have any questions or need to receive proper use instructions, contact the Parker LORD Customer Support Center at +1 800 234 Fusor (3876) or visit Fusor.com.

**To comply with the requirements of the Fusor Repair Products Lifetime Guarantee, attach a copy of this completed page to the repair record, and retain with your files:**

**Vehicle Make/Model:** _____

**Vehicle Identification Number:** _____

**Fusor Product(s) Used for Repair:** _____

**Lot Number(s) on Cartridge(s) Used for Repair:** _____

**This guarantee is void if product is used after the date printed on the cartridge label. Parker LORD Terms and Conditions of Sale shall apply to all sales of Fusor products.*

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