FUSOR® 108BE METAL BONDING ADHESIVE (MEDIUM)

Technical Data Sheet – EMEA only

Fusor® 108BE adhesive is a two-component, acrylic-based metal bonding adhesive offering faster cure time than typical panel bonding adhesives. Fusor 108BE adhesive can be used for panel bonding, weld bonding and rivet bonding of properly prepared quarter panels, rear body panels, roof panels, door skins, van side panels, and outer truck bed panels.

Features and Benefits

Snap Cure: provides fast room temperature cure, resulting in reduced cycle times.

Versatile: bonds a variety of metal, including bare metal, steel and aluminum; no welding required.

Environmentally Resistant: acrylic chemistry provides excellent corrosion protection over epoxy adhesives.

Application

Prepare: Follow the vehicle manufacturer's guidelines regarding the fastening of the replacement panel (welding, mechanical fasteners, or bond only).

Remove existing adhesive, e-coating, corrosion protection or galvanized 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.

If metal has a pewter appearance, then not all of the galvanized coating has been removed. The metal should be shiny in appearance. If sectioning, the seam will need a 10° bevel for a smooth transition into the existing panel (see Figure 1).

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 applicator and remove the end cap. 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.

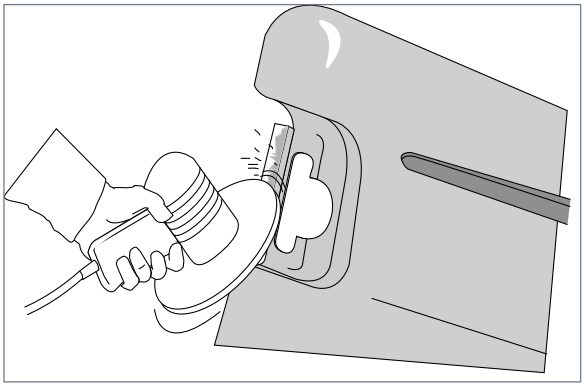

Figure 1. If Sectioning, 10° Bevel Required

Typical Properties*	
Appearance	Gray Paste
Base Chemistry	Acrylic
Work Time	40 minutes @ 70°F (21°C)
Clamp Time	2 hours @ 70°F (21°C)
Cure Time	4 hours @ 70°F (21°C)

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

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Apply a 3/8 to 1/2 inch (9.5 to 12.7 mm) bead of adhesive to the prepared mating surfaces (see Figure 2).

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 2 hours at 70°F (21°C).

Adhesive squeeze out should be removed and surface wiped clean with a solvent.

Cure requires 4 hours at room temperature (70°F [21°C]).

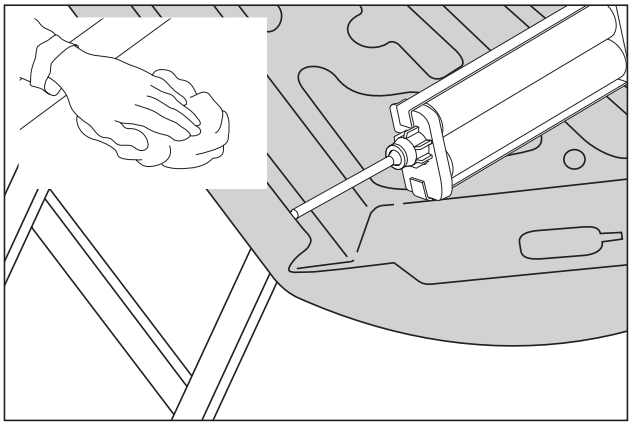

Figure 2. Apply Adhesive

Shelf Life/Storage

Shelf life is 18 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	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	2029 psi (14.0 MPa)	2067 psi (14.3 MPa)	1798 psi (12.4 MPa)	1864 psi (12.9 MPa)	1955 psi (13.5 MPa)
Lap Shear @ 176°F (80°C) (ASTM D 1002 & ASTM D 5868)					
Substrates	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	876 psi (6.04 MPa)	902 psi (6.22 MPa)	896 psi (6.18 MPa)	767 psi (5.29 MPa)	675 psi (4.65 MPa)
Lap Shear @ -40°F (-40°C) (ASTM D 1002 & ASTM D 5868)					
Substrates	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	2614 psi (18.0 MPa)	3225 psi (22.2 MPa)	3412 psi (23.5 MPa)	2211 psi (15.2 MPa)	2390 psi (16.5 MPa)
Lap Shear after 500 hours Salt Spray (ASTM B 117)					
Substrates	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	2108 psi (14.5 MPa)	1361 psi (9.4 MPa)	1129 psi (7.8 MPa)	1361 psi (9.4 MPa)	2097 psi (14.5 MPa)
T-Peel @ Room Temperature (ASTM 1876 modified to 5"/minute)					
Substrates	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	10.22 psi (0.07 MPa)	14.53 psi (0.10 MPa)	21.83 psi (0.15 MPa)	24 psi (0.17 MPa)	13.89 psi (0.096 MPa)
T-Peel @ 176°F (80°C) (ASTM 1876 modified to 5"/minute)					
Substrates	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	11.94 psi (0.08 MPa)	14.65 psi (0.10 MPa)	17.25 psi (0.1119 MPa)	17.81 psi (0.122 MPa)	13.74 psi (0.095 MPa)
T-Peel @ -40°F (-40°C) (ASTM 1876 modified to 5"/minute)					
Substrates	Ground AL	Ground CRS	Ground HDG	Ground EGS	E-Coat
Results	5.82 psi (0.04 MPa)	1.86 psi (0.013 MPa)	22.09 psi (0.152 MPa)	22.46 psi (0.155 MPa)	6.54 psi (0.045 MPa)

Substrate	Surface Treatment
Aluminum (AL) 6061T6, 0.032" thick	60-grit grind
Cold Rolled Steel 1010 (CRS), 0.032" thick	60-grit grind
Hot Dipped Galvanized Steel (HDG), 0.032" thick	60-grit grind
Electro Galvanized Steel (EGS), 0.032" thick	60-grit grind
E-coat Primed Steel (ECPS), 0.032" thick	Scuffed

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

**Data is typical and not to be used for specification purposes. Fusor 108BE adhesive demonstrates cohesive failure on most metal substrates.

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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Parker Lord shall not be liable under any circumstance for any liability, loss, damage or expense directly or indirectly arising from the application and use of Fusor Products sold hereunder or from any other cause. Parker Lord shall not be liable under any circumstances for consequential, indirect or special damages. **PARKER LORD'S LIABILITY FOR BREACH OF WARRANTY HEREUNDER IS IN ALL INSTANCES LIMITED SOLELY AND EXCLUSIVELY TO THE REASONABLE COSTS OF REPAIR AND/OR REPLACEMENT OF THE BONDED COMPONENTS OF THE VEHICLE.**

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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