

Aluminum Bonding Guide



	#1035C	#1010C	#1005C	Panel 90 # 8051
Work Time	35 Minutes	10 Minute	5 Minute	90 minutes
Handling time	2 hours	30 Minute	15 Minute	4 hr. at R/T or 10-15 min @ 180F
Paint Time	4 Hours	1 Hr.	45 Minute	24 hours

* All data taken at 23°C (74° F)

Introduction:

PLIOGRIP Panel 1035C, 1010C, 1005C /Panel 90 are a two-component structural Acrylic and epoxy cartridge system intended for use in secondary panel bonding (e.g., roof skins, door skins, quarter panels and rear body panels). No VOC'S

This document is intended as a general guide to making a successful repair. For detailed guidelines, refer to the specific OEM repair procedure.

Panel Removal and Preparation:

1. Straighten any damage to vehicle prior to removing panels.
2. Remove large portions of the panel, making sure not to cut into the flanges.
3. Remove the outer flanges. This will depend on how attached from factory. If rivet bonded, drill out rivets then apply heat (350F) and slowly pry apart.
4. Straighten any damage to the flanges with a hammer and dolly.
5. Grind all adhesive, paint and e-coats from both surfaces to be bonded using 80-grit abrasive discs. Be sure to grind all bonding areas to. **Note: Try to stay within the bonded surfaces. Proper aluminum tools and vacuum systems should be used.**
6. Blow off both surfaces with clean, dry air. 7. **Note: Once you have sanded the aluminum, Panels have to be boned and clamped within 30 minutes as the exposed aluminum will start to oxidize and will not be a strong bond.**
8. Pre-fit new panel for proper alignment. **Note: Make sure suspension is loaded during pre-fit.**
9. Remove the part from the vehicle, then clean all surfaces with a prep-solvent.

Panel Installation:

1. Remove the cap of the adhesive cartridge by prying the uppermost slot with a flat screwdriver. The cap may be retained for future storage.
2. Properly place the cartridge into the gun. Prior to attaching the mixer, dispense a small amount of adhesive to ensure both sides flow evenly.
3. Attach mixer, and dispense two inches for proper mix.
4. Apply a 3/8- to 1/2-inch bead of adhesive to all areas to be bonded then spread or brush the adhesive evenly, making sure to cover all surfaces of the bare metal. **Note: This eliminates exposed metal, which would be susceptible to corrosion or oxidation. After both flanges have been covered, Option: apply another bead to either flange for mating.**

5. Align the new panel in place, and apply even pressure. After the panel has been positioned, do not pull away from the vehicle. If repositioning is required, slide the panels against one another to ensure no air is trapped in the bond line.
6. Clamp tightly in place every 4 - 6 inches. **Note: adhesive incorporates 10 mil glass bead technology to ensure proper panel gap and to prevent over-clamping.**
7. Install rivets or fasteners while adhesive is wet
9. 1035C clamp for 2 hours. Clamp Panel 90 a minimum of 4 hours at 23°C / 74°F. Longer clamp times may be necessary if lower temperatures are experienced. Clamp times may be accelerated on Panel 90 by use of a heat gun or lamp for 10-15 minutes at 180° F.
11. Allow proper dry time.
12. Finish, sand and paint per paint manufacturer's recommendation.
13. For future use of the adhesive, remove cartridge from the gun and either leave on the mixer tip or replace the original cap.

CAUTION: This product contains ingredients which could be harmful if mishandled. Contact with skin and eyes should be avoided and necessary protective equipment and clothing should be worn. Do not breathe vapor or dust. Application of this product and all sanding activities should be performed in areas with adequate local exhaust ventilation using ventilation equipment designed to reduce exposure to chemical vapors and dust.

IMPORTANT INFORMATION: Refer to the Material Safety Data Sheet (MSDS) for information on safety and handling before use. Ashland's cartridge system is sold as a kit, and performance has been verified using the kit content. Do not attempt to use other mixers in the application of this product. Additional mixers are available. This Repair Guide is incorporated as part of Ashland's Recommendations for Use of PLIOGRIP by Valvoline products. Failure to adhere to recommendations in this Repair Guide and the Instructions sold with the product voids the Lifetime Warranty.

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