

## FLEXIBLE/SEMI-FLEXIBLE

Proper preparation of the substrate is 95% of the success of the plastic repair. At IES™, we have simplified the repair process. The technician no longer needs to learn all of the different kinds of plastics by symbols, such as, TPO, SMC, TPUR, etc. There are over 2,000 different plastics used in the automotive marketplace, new, used and remanufactured. Some have identification symbols and some do not have any at all.

Using the simplified IES™ Repair procedures, the technician needs to know only if the substrate is **flexible** or if the substrate is **rigid/semi-rigid**. If the substrate is rigid/semi-rigid, the only other identification that is needed is whether the substrate becomes 'greasy' when sanded or not.

**THE ABOVE IS THE ONLY I.D. NEEDED!**

### FLEXIBLE/SEMI-FLEXIBLE PLASTIC BUMPER REPAIR

1. Identify on the back side if the substrate becomes "greasy" when sanded. If the substrate becomes "greasy", this is an olefin (TPO-type) product and will need IES 4182 INTER-BOND ADHESION PROMOTER.

**NOTE: DO NOT use any Adhesion Promoter if the substrate is not "greasy" when sanded.**

**NOTE: If IES 4182 INTER-BOND™ ADHESION PROMOTER is used too heavily, the bond may fail.**

2. Clean off the painted surface using a scuff pad and IES Super Foam Heavy Duty Cleaner (#4535). Rinse thoroughly with water and air dry.

3. With a clean cloth, use IES SUPER CLEAN™ (1700 quarts or 4700 aerosol) or IES SPECIALTY ADHESIVE REMOVER (1780 quarts) to clean all contaminants off of the painted surface, such as waxes and silicones.

4. Using an 120 grit D.A. sander, sand all the paint off the substrate to be repaired - at least 3" to 4" past the area to be repaired.

**NOTE: DO NOT ALLOW THE SUBSTRATE TO GET HOT!**

(This releases plasticizers from the substrate and can be detrimental to the adhesion process.)

5. Now "dish" out the area to be repaired, sanding or grinding an area at least 1½" on both sides of the area to be repaired. Again, KEEP THE SUBSTRATE COOL while sanding.

6. If the repair is a tear, drill a 1/8" hole at both ends of the tear to help prevent further tearing.

7. If the tear or hole goes all the way through the plastic part, prepare the back side as the front side has been prepared, using steps 1 through 5. **NOTE: IES INTER-PATCH (#70545) may be used on the back-side repair.**

8. Using a scuff pad, use soap and water to thoroughly scrub the bare substrate. Rinse thoroughly and let air dry completely.

**NOTE: NEVER USE ANY SOLVENT ON BARE SANDED PLASTIC, THIS MAY CAUSE SWELLING AND/OR DISTORTION TO THE SUBSTRATE. DO NOT DRY USING AN AIR HOSE, AS THIS MAY CONTAMINATE THE SUBSTRATE.**

9. If reinforcement is needed on the back side of the repair, and the substrate calls for Adhesion Promoter, use a light dusting coat of IES 4182 INTER-BOND™ ADHESION PROMOTER. Allow to dry for 10-15 minutes.

10. If reinforcement is needed on the back side of the repair, use IES Fiberglass Body Repair Tape (#70528) or IES Aluminum Foil Body Repair Tape (#70525). Apply the reinforcement tape across the repair area with one piece and then "X" apply a second piece across the first piece. (This adds about 4 times the strength of the repair.)

11. Use IES EPOXYFLEX, in any dispensing form; 10 fl. oz. squeeze tube kit (#8010), 22 fl. oz. cartridge kit (#8011), 32 fl. oz. can kit (#8013), 2 gallon can kit (#8015). Also INTER-MIX 5 (#8417) and/or INTER-MIX 40sec FSF (#8409).

12. When using a hand-mix repair compound, mix equal amounts (1 to 1) of side A and side B, mix together until the color is uniform with no streaks. For INTER-MIX self-mixing repair compound, follow cartridge setup instructions. Apply on top of the reinforcement tape on the backside first with at least an 1/8" build. Be sure that the damaged area is lined up correctly. Allow the repair compound to set.

13. After about 10 minutes, repeat step 11 on the front side without the reinforcement tape.

**NOTE: When applying to the front side, ensure not to apply any of the repair compound on top of any painted surface, as this can lead to peel back and may not feather edge.**

**NOTE: EVEN THOUGH IES EPOXY CAN BE SANDED AND FINISHED AFTER APPROXIMATELY 10-15 MINUTES, FULL CURE ON ALL OF OUR EPOXIES TAKE 6 TO 8 HOURS AT 75°F.**

14. After set-up of the repair compound, you can sand in approximately 10-15 minutes. Use an 120 grit on a D.A. to sand down. **NOTE: KEEP THE SURFACE COOL.** IES recommends using the D.A. in an "on-off" process, feeling the surface frequently, to ensure the surface remains cool. After sanding and low spots are noted, scuff the low spots, mix additional repair compound and fill the low spots. Let set as before and hand sand to finish. Hand sand using 120 grit, then 320 grit, then 400 grit paper. **Optional:** IES #8080 Easy-Sand Filler/ Surfacer may be used to fill the low spots before the final sanding.

15. Use IES 4185 FLEXIBLE PRIMER SURFACER for any remaining light scratches. After IES 4185 dries, hand sand using 400 grit paper, wet or dry.

16. Paint as per paint company's directions.

**17. For tab repair, use IES QUICKIE-FIX 40 (8440).**

**NOTE: ONLY ONE REPAIR COMPOUND IS NEEDED FOR THE COMPLETE REPAIR. BACKSIDE, MIDDLE, FRONTSIDE AND FINISH.**

**CAUTION:** Wear gloves and eye protection when using products. Avoid contact with eyes, skin & clothing. Wash thoroughly after using. Do not breathe vapor. Use only in well ventilated areas. Do not take internally. In case of eye or skin contact, flush immediately with plenty of water. Please read Material Safety Data Sheets (MSDS).

**Notice to Purchaser:** The following warranty is in lieu of all other expressed or implied warranties, specifically all goods are manufactured of first class materials and by competent professionals. We have no control over the use and application of the contents herein. Our liability shall not exceed the purchase price.