

FLEXIBLE/SEMI-FLEXIBLE

Most of the plastics used in modern automobiles today are made of thermoplastic olefins (TPO), polycarbonates, polyesters, polypropylenes, polyurethanes, polyamides, or blends of these. Glass fibers may also be used to provide strength and rigidity. The first step in repairing a plastic part is to identify the part as being either rigid/semi-rigid or flexible. If the part is rigid/semi-rigid, then follow the Rigid/Semi-Rigid Repair Procedures. If the part is flexible, then follow the Flexible Repair Procedures. Each repair process uses a different repair adhesive filler. There are a few parts of today's automobiles that are made from Polyethylene plastic (milk bottle type plastic), such as windshield washer fluid tanks and fuel tanks. The IES repair adhesive/filler will not bond to this type of plastic even when using an adhesion promoter and should be repaired using a plastic welder. Please see our Plastic Welder Instructions for this type of repair.

FLEXIBLE/SEMI-FLEXIBLE PLASTIC REPAIR

1. Clean off the painted surface using a scuff pad and soap and water. Rinse thoroughly with water and air dry.
2. With a clean cloth, use IES Super Clean (1700/4700) or IES Specialty Adhesive Remover (1780/4780) to clean all contaminants off of the painted surface, such as waxes and silicones.
3. Using an 80 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: KEEP THE SUBSTRATE COOL while sanding.
4. 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.
5. 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 4. If desired, IES Inter-Patch (70545) may be used on the back-side repair. Please read 70545 TDS for additional directions.
6. Blow off with clean, dry, compressed air. Clean again with IES Super Clean (1700/4700), IES Super Clean II (1790/1791) or IES Specialty Adhesive Remover (1780/4780). NOTE: Give adequate time for cleaners to flash off before proceeding to the next step.
7. Apply one light, wet coat of IES Adhesion Promoter (4182) to all prepped surfaces. Allow approximately 20 minutes drying time before applying the repair compound.
8. 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.)
9. Use IES Epoxyflex (8010/8417/8617) or Quickie-Fix 1.5 (8642/8643).
10. 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 cartridge self-mixing repair compounds, 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.

11. After about 10 minutes, repeat step 7, 9 & 10 on the front side without the reinforcement tape.

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

12. After the repair compound has set-up (approx. 10-20 minutes), sand first with 80 grit paper and then finish sanding with 180 grit paper. **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 High-Stress Epoxy and fill the low spots. Let set as before and sand using 120 grit, then 320 grit paper. **Optional:** IES Easy-Sand Filler/ Surfacers (8080/8480/8680) may be used to fill the low spots before the final sanding.

13. Use IES Flexible Primer Surfacers (4185) or All In One Self Etching Primer (4186/4188) to fill any remaining light scratches. After the primer dries, hand sand using 400 grit paper.

14. Paint as per paint company's directions.

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 Safety Data Sheet (SDS) before using.

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.

ITEMS MENTIONED IN REPAIR

1700/4700	Super Clean Solvent
1780/4780	Specialty Adhesive Remover
1790/1791	Super Clean II Anti-Static
4182	Adhesion Promoter
4185	Flexible Primer Surfacers Gray
4186/4188	All In One Self Etching Primer
8010/8417/8617	Epoxyflex
8080/8480/8680	Easy Sand Filler/Surfacers
8642/8643	Quickie-Fix 1.5 Plastic Adhesive
70528	Fiberglass Repair Tape
70525	Aluminum Foil Body Repair Tape
70545	Inter-Patch Composite Patch

RIGID/SEMI-RIGID

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RIGID/SEMI-RIGID PLASTIC REPAIR

1. Clean off the painted surface using a scuff pad and soap and water. Rinse thoroughly with water and air dry.
2. With a clean cloth, use IES Super Clean (1700/4700) or IES Specialty Adhesive Remover (1780/4780) to clean all contaminants off of the painted surface, such as waxes and silicones.
3. Using an 80 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: KEEP THE SUBSTRATE COOL while sanding.
4. 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.
5. 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 4. If desired, IES Inter-Patch (70545) may be used on the back-side repair. Please read 70545 TDS for additional directions.
6. Blow off with clean, dry, compressed air. Clean again with IES Super Clean (1700/4700), IES Super Clean II (1790/1791) or IES Specialty Adhesive Remover (1780/4780). NOTE: Give adequate time for cleaners to flash off before proceeding to the next step.
7. Apply one light, wet coat of IES Adhesion Promoter (4182) to all prepped surfaces. Allow approximately 20 minutes drying time before applying the repair compound.
8. 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.)
9. Use IES High-Stress Epoxy (8001/8416/8616), Quickie-Fix 40 (8440) or Quickie-Fix 1.5 (8642/8643).
10. 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 cartridge self-mixing repair compounds, 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.

11. After about 10 minutes, repeat step 7, 9 & 10 on the front side without the reinforcement tape.

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

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13. Use IES Flexible Primer Surfacers (4185) or All In One Self Etching Primer (4186/4188) to fill any remaining light scratches. After the primer dries, hand sand using 400 grit paper.

14. Paint as per paint company's directions.

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4185	Flexible Primer Surfacers Gray
4186/4188	All In One Self Etching Primer
8001/8416/8616	Hi-Stress Epoxy
8080/8480/8680	Easy Sand Filler/Surfacers
8440	Quickie-Fix 40 Repair Adhesive
8642/8643	Quickie-Fix 1.5 Plastic Adhesive
70528	Fiberglass Repair Tape
70525	Aluminum Foil Body Repair Tape
70545	Inter-Patch Composite Patch