

Plasti-Mend® Black for ABS Plastic Repair

Plasti-Mend Black is a specially formulated mix of plastic resins and solvents designed to repair ABS plastic used for RV holding tanks, Motorcycle and Auto parts, cartop cargo boxes such as Thule or Yakima and other uses. It can be used to repair holes of any size, cracks and even modify or build special tanks or parts. It works by chemically melting an application of plastic resins into the existing plastic, creating a new layer of ABS plastic bonded into the original plastic.

P- M Black works only on solvent reactive plastics. It will work very well on ABS, PVC, Styrene, Acrylics and moderately well on Polycarbonates.

It will not work on Polyethylene plastic. This is usually the opaque milky-white plastic used for water tanks or the milky-grey to dark grey/black plastic used for some holding tanks. Most fuel tanks and anti-freeze overflow tanks as well as milk jugs and plastic buckets are also polyethylene. Polyethylene requires thermal welding to properly repair.

P- M Black is a permanent repair for ABS holding tanks and other items made of solvent reactive plastics since it bonds into the plastic, making it stronger than the original. Sometimes ABS plastic cement for gluing plumbing fittings is used but it does not contain the proper solvent and resin mixture to properly bond for an effective topical repair. There are other repair adhesives for temporary repair but none permanently bond into the plastic for an effective repair like Plasti-Mend.

Plasti-Mend White is a similar product for repair of ABS, Styrene or PVC shower pans, sinks or other objects such as air conditioning shrouds, pop-up campers and car top cargo boxes such as Thule or Yakima. Like white ABS plastic, it does not have the structural strength of P- M Black or black ABS, so it should not be used on tanks etc. Plasti-Mend Clear is an acrylic based product used to repair light lenses, refrigerator trays and other acrylic articles. Check with your supplier or at Plasti-Mend.com for these other products by Plasti-Mend.

Plasti-Mend Black and White can be used interchangeably or together. They can be mixed for color matching to shades of grey used on car top cargo boxes etc.

Plasti-Mend can be stored before or after use by turning the can upside down to allow the Plasti-Mend to seal the can so the solvents cannot evaporate. As long as the Plasti-Mend does not dry out it should be good to use. The shipping clips should be reinstalled to keep the lid on when pressure develops due to heat, changes in atmospheric pressure, etc.

Instructions for Use of Plasti-Mend Black

Read all instructions before beginning.

Caution

Check the Material Data Safety Sheet for more complete safety instructions. P- M Black requires special precautions for use. **Use only in well ventilated area and with proper Personal Protection Equipment.** A vapor mask for organic solvents should be used even in a well ventilated area. A vapor mask cannot be relied on for protection from higher concentrations of Methylene Chloride that will develop in areas not well ventilated. **Exposure to the solvents in Plasti-Mend without proper precautions can be damaging and even fatal.** For complete information refer to the MSDS for the product and proper industry standards for use of organic solvents.

Pressure may develop in the can with temperature increase. Use care and remove lid slowly to exhaust any pressure buildup safely.

Flammable --Keep away from all sources of ignition. Vapors may travel to remote ignition source and flash back.

Preparation

Surface must be clean and dry. Use a wet or damp rag and a Scotch-Bright scrubber to clean any loose dirt or other residues for about 6-8 inches around the repair area. Wipe it dry and use the cleaner/primer to clean/prep about 3-4 inches around the repair area. There should be no moisture from inside a tank leaking onto the patch area. If necessary, drill a hole in the low point of the tank to allow water to drain. The hole can be sealed later with Plasti-Mend. For best results the inside of a tank should be dry but this is not necessary. P- M Black works best between 50°- 80°f. but can be used outside that temperature range, even in below freezing temperatures..

P- M Black cannot be left open for extended periods. The solvents that are necessary for proper performance evaporate quickly. The lid must be tightly replaced as soon as possible after use. For proper performance, the product should be about the consistency of honey and flow easily. If the plastic resin is thick or gelled, try shaking or stirring it but if it does not thin after shaking, do not attempt to use without thinning. This is a sign that too much of the solvents have evaporated. It can be thinned with the Plasti-Mend Thinner. Use the thinner sparingly since it is easy to thin too much. Two or three teaspoons of the cleaner/primer per pint can be used to thin but no more. It does not contain the proper solvents to use more for thinning.

Shortly after opening, the can and contents may begin to get cold and cause condensation. This is due to the rapid evaporative process. In hot weather, it may help to chill the P-M Black in the refrigerator to slow the evaporation during application. Condensation may be noticed on the surface of the product soon after application also. This is normal but all condensation should be dry before recoating. Condensation or high humidity may leave a white or gray “blush” on the plastic after drying. This is normal and although not necessary, can be removed by applying some of the cleaner/primer.

There is no established shelf life on P- M Black at this time. As long as the solvents have not evaporated it should be good for use. For long term storage, can should be turned up-side down.

P- M Black, the thinner and the cleaner/primer will damage many plastics and finishes upon contact.

For most applications, do not apply more than two coats per day or apply to both sides in the same day. This can cause excessive softening and or deforming of the target plastic. If plastic becomes soft, allow to dry and harden before applying further coats. It is normal for the Plasti-Mend to stay soft for several days. In most cases the Plasti-Mend should be applied in as heavy a coat as possible without the resin running or sagging.

Plasti-Mend can be recoated in 1-4 hours minimum or at any time over that. Applying a second coat in 1-4 hours improves bonding of the first coat to the target plastic by increasing the softening and melting of the Plasti-Mend into the target plastic. It is not necessary to use the cleaner primer between new coats.

For applying a sheet ABS patch, brush the Plasti-Mend on the sheet ABS and on the target plastic then put them together, pressing the patch into the Plasti-Mend to allow it to bond. Plasti-Mend can then be brushed around the edges or over the whole patch.

For Holes

Cut the reinforcement mesh or sheet ABS plastic about 1 – 2 inches larger than the hole. The mesh can be in a number of pieces to overlap to fit uneven areas better but the hole must be covered. Brush on a coat of plastic resin, brushing some inside the edge of the hole and place the mesh over the hole. Use the brush to flatten and position the mesh so the hole is covered evenly and completely. Continue to press the mesh into the plastic resin with the brush until it sticks down tight. Brush a heavy coat of the plastic resin over the mesh area so that it penetrates the mesh and provides an even coat over the area. If enough plastic resin is applied it will penetrate the mesh and provide an even coat inside. This should bond with the plastic resin that was brushed inside the edge of the hole. The brush can be wrapped in plastic and saved for later coats. Allow the resin to harden for 1-4 hours and add a second coat. There should be at least three coats-more for larger or difficult repairs. The resin should extend 2-3 inches around the hole with later coats concentrated in the area of the hole. Do not apply more than two coats per day if possible. If sufficient time is not allowed between coats, the repair area of the tank may begin to get soft and flexible. This is not a problem except it can distort the plastic and shows the P- M Black is melting into the plastic. Just give the area some time to harden before adding more coats. Holes larger than 3-4 in. may best be repaired by using an additional piece of sheet ABS plastic fitted and fastened in or applied as a patch over the area rather than using the mesh although holes of any size can be repaired with the mesh. See Modifications below.

For Cracks

The ends of the cracks can be drilled as an extra measure on longer cracks but is not necessary. Since P- M Black softens the existing plastic it usually takes care of stretch stresses which might cause the crack to travel further. In some cases a hack saw blade or Dremel can be run along the crack to widen it or drill a number of holes along the crack. This will allow better access for bonding by the P- M Black. If there are multiple cracks in an area, overlaying or replacing the area with sheet ABS may be an option. See Modifications below. If the sides of the crack do not line up a screw can be run into the crack or a brace screwed to the tank to hold it even while the resin is applied. Do not apply the plastic resin over the screws-remove them before sealing the area. For most cracks cut the mesh or sheet ABS plastic into 1-2 inch strips. Brush a layer of the plastic resin along the crack area. Try to get some resin into the crack if possible to bond the crack back together. Immediately apply the mesh or plastic along the crack and press into the resin with the brush. Brush another layer of resin on over it immediately. This would be considered the first coat. The brush can be wrapped in plastic and saved for later coats. Allow to harden for 1-4 hours and apply another coat. There should be at least three coats for mesh repairs-more for larger or difficult repairs. Do not apply more than two coats per day if possible. If sufficient time is not allowed between coats, the repair area of the tank may begin to get soft and flexible. This is not a problem except it can distort the plastic and shows the P- M Black is melting into the plastic. Just give the area some time to harden before adding more coats. Many times cracks may be due to the plastic being stretched too thin during the thermoforming process. Apply resin in a larger cover area anywhere this seems to be the case.

Cracked, broken or cut ABS or PVC pipes can be repaired using the above methods with Plasti-Mend. This is very helpful if DWV pipes are cut to remove a holding tank. They can be repaired without a fitting so the tank can be reinstalled without getting fittings lined up during reinstall. The repair is stronger than a fitting.

Replacing fittings/valve assemblies

Many times the fittings and valve assemblies are torn from tanks or crack due to flexing. P- M Black can be used to re-fasten the fittings into the tank. The fitting/valve assembly must be securely fastened into proper position using removable braces, screws, etc. that can be removed after some of the plastic resin is applied and allowed to harden to hold the assembly in place. Cracks may need to be enlarged with a hack saw blade, drill or Dremel to improve the fit and open cracks for better bonding. Work the plastic resin into the cracks around the neck of the tank. Apply the mesh in smaller overlapping pieces to fit it to the curvature. Apply a heavy coat of plastic resin over the mesh and allow to harden for 1-4 hrs. A second layer of mesh can be applied with the next coat of resin for added strength. Apply several coats of plastic resin extending about four inches from the cracked area. It is recommended to apply the repair all the way around the fitting even if it is not cracked. This will prevent future cracking of the fitting. Do not use directly on valve bodies as it can cause damage or distortion of the valve body.

For Modifications and Tank Construction

In most cases a new tank can be purchased for less than modifying or building a new one but sometimes this may not be practical. P- M Black can be used with sheet ABS plastic to modify or build custom tanks. ABS plastic is easily formed and bent using a heat gun or for smaller pieces, heating in an oven to over 200F. The plastic will start to become pliable at about 200F but setting an oven to 300F will produce quick results with no damage to the plastic if not left too long. A heavy pair of gloves will be required for handling. To modify a tank it can be cut and bent to a new size etc. and then the corners closed up with

P-M Black and mesh. If a large area of a tank needs to be replaced, ABS sheet plastic is easily available from many local plastic suppliers or smaller pieces are available from Plasti-Mend. The piece can be cut and shaped to fit the replacement area and bonded in using P-M Black. P-M black should be applied to both pieces and pressed firmly into place. If necessary, screws can be used to hold patch in place until dry. Screw holes can be sealed with P-M Black with later coats.

A tank can be built for a special application such as in an area in which a whole tank could not be fitted or when an odd size or shape is not possible with a manufactured tank. Using sheet ABS, the pieces can be cut to size, formed and bonded together with P- M Black to make almost any configuration of tank.

For Motorcycle, RV and Auto Body, Thule luggage carriers, etc

It may be necessary to use a filler after sanding of the Plasti-Mend due to bubbles. These are due to the solvents "boiling off" and cannot be helped. Another thin layer can be brushed on to fill the holes also. Do not leave the part exposed to heat or sunlight while hardening as this aggravates the problem. Thinning and applying in a number of light coats may alleviate this problem also.

For Holes

Bevel the outside edges of the hole. If access is available from the back, apply a patch with mesh or sheet ABS from the back. Cut the reinforcement mesh about 1 – 2 inches larger than the hole. Brush a layer of the plastic resin on the repair area and on the sheet plastic patch. Fit the mesh or plastic over the hole. Don't worry if the plastic resin starts to "skim over" before the patch is in place. Use a chip brush to flatten and position the mesh so the hole is covered evenly and completely. Apply a heavy coat of plastic resin over the mesh extending 1-2 in around the hole. The brush can be wrapped in plastic and saved for later coats. Allow the resin to harden for 1-4 hours. Apply resin in the hole to build up to outside level.

If access is not available from the back, apply a patch with mesh from the front but press into the hole. Cut mesh slightly larger than hole. A piece of sheet ABS can be cut to go into the hole and P-M Black used to fasten it into place. If there is foam inside part, try to protect with poly plastic as the Plasti-Mend will melt the foam. Brush resin around edge of hole and on patch. Apply mesh on bevel and press below outside level. Allow to harden. Trim or sand away any mesh that sticks up. Apply resin in the hole to build up to outside level.

For best results, allow to cure for at least 24 hours. Sand/File off outside and finish as required.

For Cracks

If access is available from back, apply a patch with mesh or sheet plastic from the back. For most cracks cut the mesh or plastic into 1-2 inch strips. Brush a layer of the plastic resin along the crack area. Try to get some resin into the crack if possible to bond the crack back together. Immediately apply the mesh or plastic along the crack and brush another layer of resin on over it. The brush can be wrapped in plastic and saved for later coats. Allow to harden for 1-4 hours and apply another coat. Many times this is all that will be needed. The outside can be left or refinished as required.

If access is not available, the crack can be beveled and a narrow strip of mesh applied from the front with a layer of plastic resin. Allow to harden and apply further coats to build up to outside level.

As another option holes can be drilled at opposing angles along the crack and filled with plastic resin

For best results, allow to cure for at least 24 hours. Sand/File off outside and finish as required.

To Re-Attach Mounting Tabs etc.

Apply resin to break area and position broken tab. Using screwdriver, smooth resin around break area and apply extra resin if necessary. Use duct tape to hold tab in place until resin dries.

Or;

Apply resin to a small piece of mesh and the break area. Position the broken tab and apply the mesh for support. The tab can be covered with mesh for extra support as long as it does not interfere with mounting. Brush on extra resin taking care to keep resin from interfering with mounting.

For best results, allow to cure for at least 24 hours. Grind/file off excess resin that interferes with mounting.

For ABS Boats

ABS plastic used for boats is normally a lamination of a thin polyethylene skin over an ABS plastic core. The core will usually be a different color than the skin. These can be repaired with Plasti-Mend but the outer skin will need to be removed by sanding. Plasti-Mend will not stick to polyethylene. After removing the skin, the repair can be made following the earlier instructions. For cracks or holes an application should be made from both sides if possible. For building up a worn area such as the bottom keel of a canoe etc., an application from one side will usually suffice. Plasti-Mend White, tinted to a preferred color, can be used as a topcoat over the PM Black.

Plasti-Mend assumes no liability for any damages or loss of any kind that might arise from the improper or incorrect use of its products.

Plasti-Mend attempts to present information to assist in the proper use of its products but assumes no liability for the interpretation, mis-interpretation or completeness of that information.

This information is provided for guidance but it is the responsibility of the user to determine proper precautions and applications as related to the product.

www.plasti-mend.com

e-mail sales@plasti-mend.com

Customer Service Phone 1-800-821-1835