

Helicopter Canopy Repair

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We all have bad days where nothing goes right. If you have not crashed your craft, then obviously you have not had it in the air very much. In the helicopter world it seems that the canopy seems to take a lot of abuse. Some of these canopies are only a few dollars while others with custom paint jobs are close to a hundred dollars. Would you be interested if I said you could repair those damaged and cracked fiberglass or ABS canopies?

There is a product manufactured by Newton Supply Company located in Miami, Florida (800-888-2467) that makes it possible. The product is a 50/50 mix fiber re-enforced epoxy called Model Matrix. The material is easy to use, cures in 7-10 minutes and has a guaranteed shelf life of one year. The material cost is \$19.95 for 8 oz of material and \$29.95 for 16oz of material.

This "How To" illustrates how to repair a cracked ABS helicopter canopy. The process would be basically the same for a fiberglass canopy.



The supplies needed to repair this ABS canopy are nothing out of the ordinary and can be easily obtained. All that is needed is Denatured Alcohol, sand paper, painters blue masking tape, Epo-Grip Model Matrix, a mixing surface, and a mixing knife or popsicle stick.



We are going to repair this canopy from the inside so we do not affect the painted outside. In the end if done carefully minimal touch up will be needed. The canopy will also be stronger than it was prior to the crash.

The first step in this repair is to rough up the surface inside the canopy using the sandpaper. Once the interior has been sanded wash the canopy with soap and water to remove the dust.



Next on the outside take the painters blue masking tape and tape the canopy back together. Take care in this procedure and only a fine crack is left to touch up. Once the canopy is taped together, wipe the interior with the Denatured alcohol to remove any oils left by fuel or fingerprints.

Now that our preparation is complete we are ready to use the Epo-Grip Model Matrix. Spoon out equal amounts of each side, and mix the two parts together until an even consistency is obtained.



Next apply a thin layer of material on the inside of the canopy. It may take you more than one mixing to reinforce the canopy for the repair. In roughly 5-7 minutes you will feel the heat of the

catalytic reaction through the canopy. At that point you are out of working time as far as spreading it.



Once you have good coverage in the areas to be repaired inside you canopy let the material cure for another 20 minutes. After the time has elapsed remove the tape from the outside of the canopy. The canopy is now repaired and ready for paint.



In the repair of a fiberglass canopy, the same process is used. However, in the end you will need auto body glazing compound to fill in areas where the gel coat has cracked away on the outside of the canopy. Just over fill those areas with the putty and allow the material to dry. Once the material is dry, wet sand the putty smooth, then paint the damaged areas.

As you can see only a little bit of touch up is required to put this canopy back into perfect condition. A little extra attention in preparation will yield excellent results. I used roughly 3/4 ounce of the Epo-Grip Model Matrix for this canopy repair, and coated the complete interior for added support. To think I used to throw away canopies with less damage than this. Not anymore!