
Hephaestus Forge X-Wing Pilot Helmet Kit



Specifications

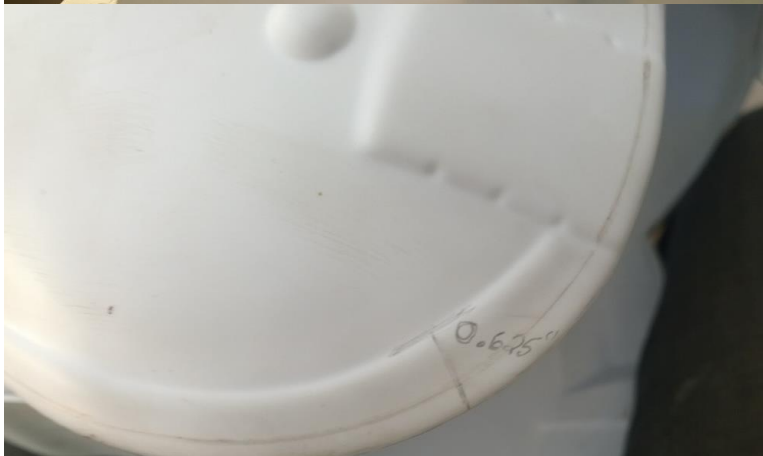
Part	Material	Recommended Glue
Shells	Polystyrene	Weld-On 4 (fast dry) Alternative: Model Glue for styrene (slower dry)
Helmet inner strip	Polystyrene	Weld-On 4 (fast dry) Alternative: Model Glue for styrene (slower dry)
Helmet outer Strip	Polystyrene	Weld-On 4 (fast dry) Alternative: Model Glue for styrene (slower dry)
Helmet front cap	Polyurethane	Epoxy (permanent) Alternative: double sided carpet tape (removable)

Recommended Materials and Tools

- Styrene glue
- Epoxy/double sided carpet tape
- X-acto knife
- Small paint brush (~1"), must not dissolve in styrene glue
- Sand paper in various grits
- Small clamps
- 2" wide duct tape or similar
- Flexible straight edge
- Rotary plastic cutter
- Pencil
- Gloves
- Appropriate mask for your styrene solvent glue

Construction Instructions

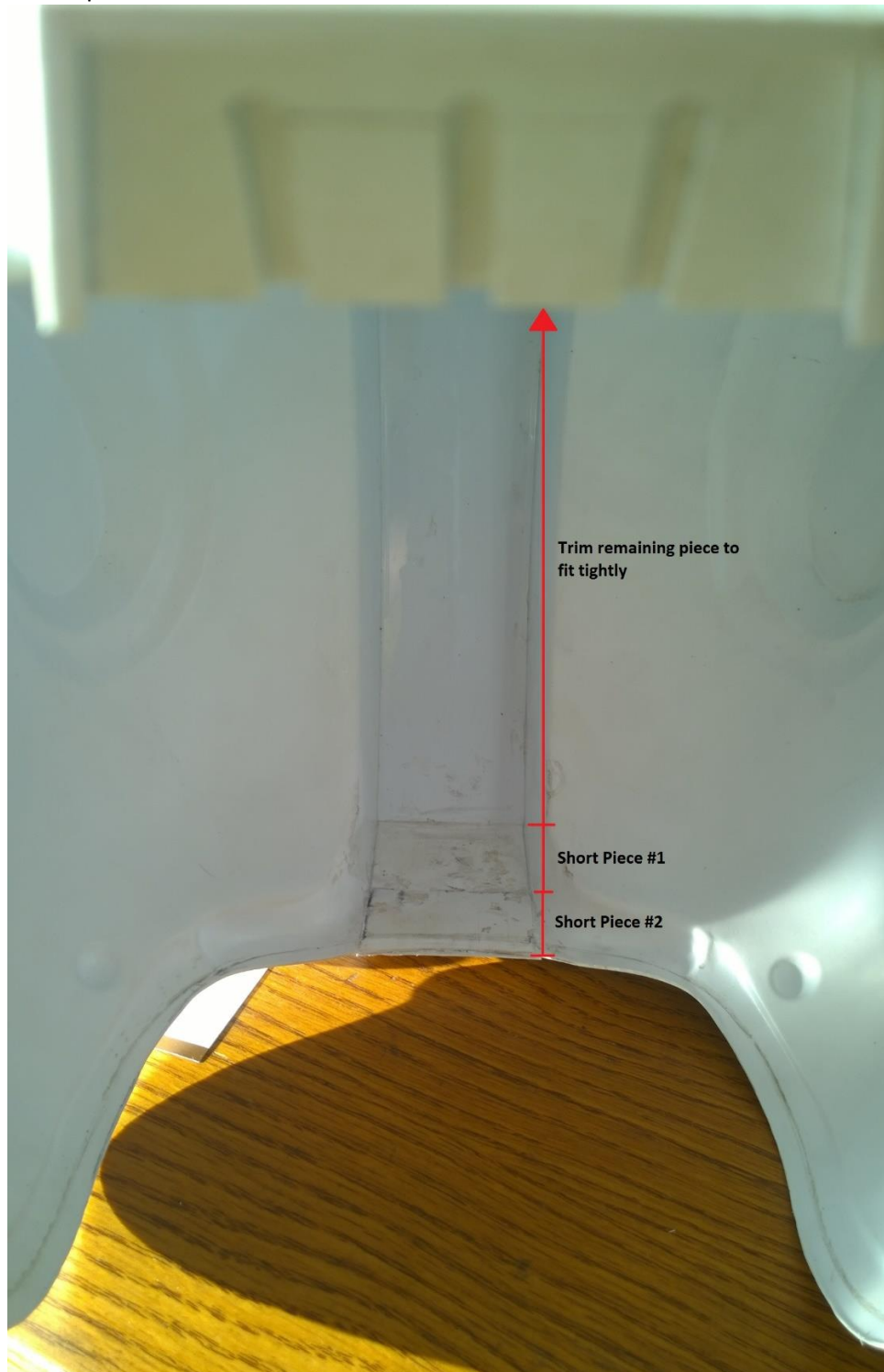
1. Cut out styrene shells and trim.
 - a. Where to trim can be ambiguous. Here are a few reference areas on the 100% (regular size helmet) to get you on track.



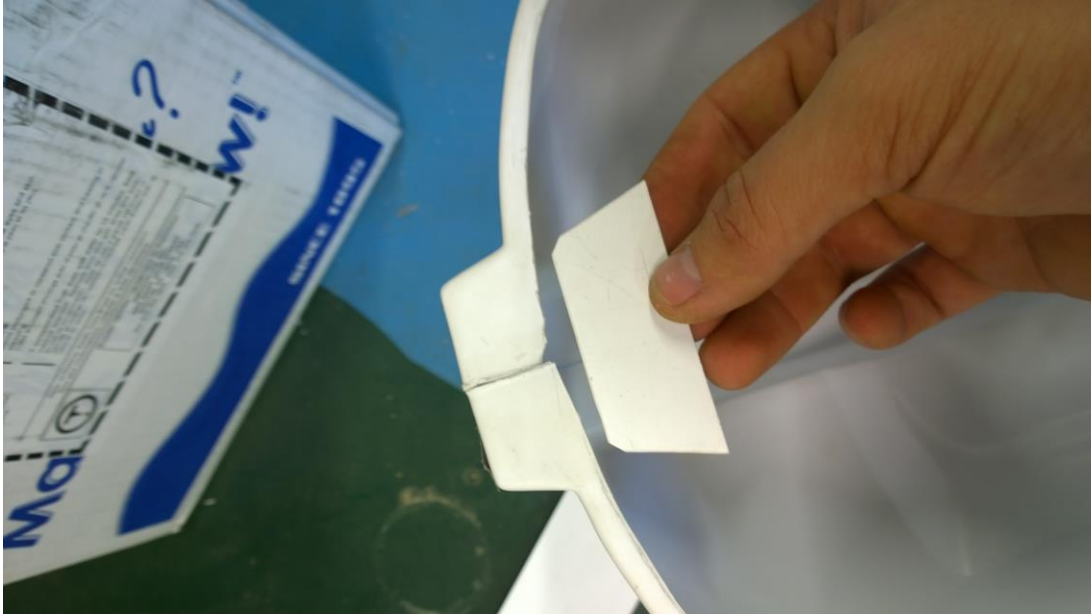
2. Using 2" wide tape, tape the entire outside length of the Mohawk together. When complete the Mohawk should be about 2" wide (50mm) on the 100% size helmet. Make sure your front cap fits over the front of the helmet. If it's too wide, as shown in the below picture, tighten up your spacing to less than 2".



3. Cut the inner strip into 3 pieces. 2 short pieces matching the lower Mohawk and one tight fitting long piece for inside the arc of the Mohawk. Leave extra on short piece #2 so that it overhangs the edge of the helmet shells. Heat and bend the short pieces as necessary. The tighter the fit, the better the glue will hold. The long piece must be snug so that the compressive force of you bending it in will cause the inner strip to press against the helmet shell and self clamp. Trim width if required.



4. Take some extra polystyrene and cut it into a wedge that fits inside the front of the helmet shells. Make sure your other inner pieces don't need trimming as a result of this extra piece.



5. Sand all areas to be glued with ~200 grit sandpaper
6. Check list before gluing inner strip.
 - a. All parts sanded
 - b. Front cap fits over the front and outer strip
 - c. Tape is secure along the length of the outer Mohawk
 - d. Inner pieces have a tight fit.
 - e.
7. Glue the front wedge and short piece #1 into the helmet. Clamp. Depending on your glue, wait the required dry time.
 - a. Make sure the long inner piece will go in after gluing. It can be used as a guide to set an even width along the entire Mohawk while the two small pieces set in.
8. Dry fit your inner strip to triple check. Glue the long inner strip into the helmet. Use a paint brush to apply glue and then compress the long strip into the Mohawk.
 - a. It should wedge itself between the front Mohawk and the lip of small piece #1.
 - b. Allow to dry.
9. Glue in small piece #3. Use small wood clamps if needed.
10. Allow everything to cure fully.
11. Sand/file the outer Mohawk until the outer strip fits flat against it. The glue and compression of the inner strip may have caused the Mohawk to bulge outwards.
12. Heat and bend the edge tail of the Mohawk to fit the shape of the lower Mohawk.
 - a. This can be tricky. If you heat it too much, the strip will deform. If you heat it too little the strip will snap.
 - b. Leave a bit of overhang off the bottom. You'll be trimming it along with short piece #2.

13. Sand the Mohawk outer strip.
14. OPTIONAL. The outer Mohawk can be riveted to the shells at the front or back of the Mohawk. This will give you something to pull against so the Mohawk outer strip is tight while you glue it to the shells. The downside is, you now have rivets in your helmet.
15. Starting at the back/bottom, line up and glue the bend you created in step 12.
 - a. Quintuple check that the Mohawk lines up straight along the whole length!
16. Glue the lower portion of the Mohawk.
 - a. Allow to cure. You're going to pull against this bond. Not hard, put enough to ensure the Mohawk is flat.
17. In 1-2" increments, add glue, pull and bond the outer strip to the shells. Repeat until done.
18. Clamp the front of the helmet to keep the strip pulled tight.
 - a. You'll have to use a paintbrush to reach under the strip to apply glue as there won't much room.
 - b. Don't apply too much glue. It's best if you can't see it squishing out. There should be a noticeable gap between the strip and helmet.
19. Allow to fully dry.
20. Trim small piece #2 and the bottom of the outer strip to match your helmet.
21. Bevel small piece #2 and the bottom of the outer strip to a point at the edge of the helmet. This will allow you to put the auto trim on. Unless beveled to a point, the extra thickness of the 2 strips will make it difficult to get the trim over the Mohawk area.
22. Add your auto trim, starting on one side and working all the way to the other side. Trim the length to fit.
 - a. Make sure it is pressed fully on as you go. The sharp corners at the back can pull up and you'll cut the trim too short as a result.
23. Carpet tape your front cap on.

