

# Flatblades

This Will be a quick guide to Flatblade construction for Amtgard. I'm really only covering the basic tricks for constructing of the blade itself since most other steps (such as quillons and pommel ) are purely aesthetic and should be left up to the smith. With that in mind, let us begin.

## Materials

- Camp Foam:** REI has gray stuff that is the best (\$15), Wal-Mart has blue stuff that is cheap but not as nice (\$6)
- DAP Weldwood Contact Cement:** about \$3 a bottle, you will need one bottle (Home Depot, Lowes, OSH)
- Scissors/Knife:** I would hope this doesn't need an explanation
- Sharpie:** Any permanent marker will do, sharpies are the best.
- Sand Paper:** 150 grit will work, something to rough up the foam before glueing.
- Core Material:** I prefer 5/8"-1" bamboo, 3/4" PVC will work too. The tutorial is for using a core that is a bit less than 1" in diameter, anything larger or smaller will need some adjusting.
- Packing Tape:** The thin clear stuff, one roll will be more than enough.
- Scotch Tape:** Not vital, but works great to hold stuff together.
- 2 flat boards:** Or anything large and flat to press the blade with. Not pressing the blade results in an UGLY sword.
- Quick Grip Clamps/ C-Clamps:** If you have these your going to be very happy, if you don't, bricks or anything else heavy will work just fine.
- PVC pipe insulation:** You will need the insulation that is approximately 1.5" in diameter and has an inside diameter of around 3/4". Do not buy the stuff with adhesive on it. It can be split on one side or not, it wont really matter.



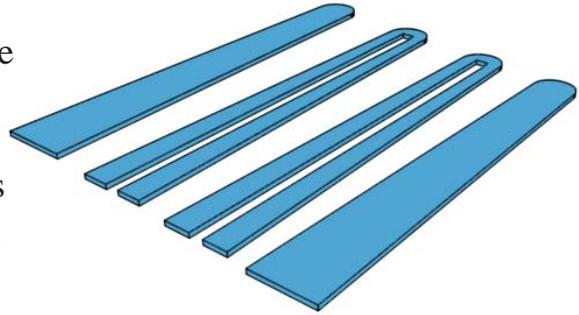
*A completed Flatblade  
Ive made*

## Before you Begin:

I find it helpful to draw out a pattern for the blade you want to make beforehand on a few sheets of paper taped together. This will allow you to trace the blade onto the foam before you cut it out. It helps a lot when trying to get everything to line up later on, other than that its time to start.

### Step 1: Cutting out the blade.

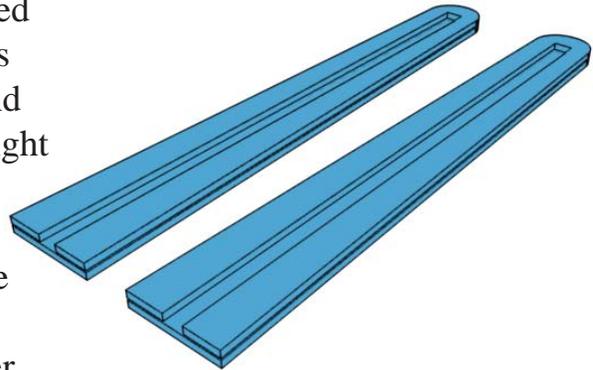
- A. Trace the paper pattern onto your foam, you will need 4 sections for the blade. Just make 4 identical ones to start with
- B. Cut out the 4 blade sections, Scissors work just fine on this foam, although a good knife will make a cleaner cut
- C. Trace the core onto 2 sections of the blade and cut out a groove for it to fit into when the blade is assembled. Make the groove a bit smaller than the core for a tight fit.



*The basic 4 sections with core groove cut out*

### Step 2: Assembling the blade.

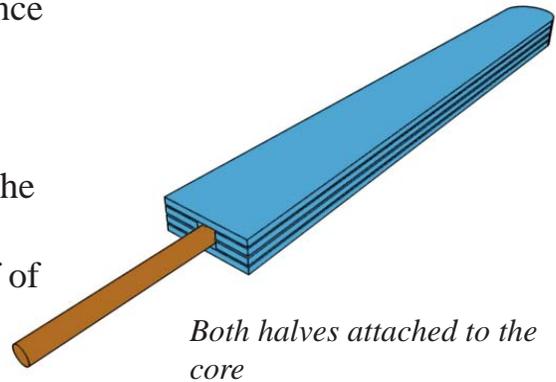
- A. Rough up all the surfaces to be glued with sandpaper. Most camp foam is smooth and shiny on the surface and the DAP will not stick to it. Just a light sanding to give the foam a fuzzy appearance.
- B. Spread a thin layer of DAP onto the inside of one of the outer sections, and onto one side of one of the inner sections. DAP works best if it is applied to both surfaces.
- C. Carefully stick the two sections together and press them between some boards and clamp them. Let them sit for quite awhile (20-30 min) to give the DAP time to completely set up.
- D. Repeat this process so you have 2 halves of the blade (see pic)



*Both halves of the blade ready for attaching to the core.*

E. When the two halves have gotten a chance to set up in the press take them out and spread DAP on the top of both of them. Also dribble some dap in the groove on both sections to secure the core inside the blade.

F. Lay the core into the groove on one half of the blade and firmly squash the other section on top. Make sure everything is lined up and then put it back in the press for about 30 min. There is a lot of tension from the core and the blade will want to poll apart if it is not pressed tightly with clamps.



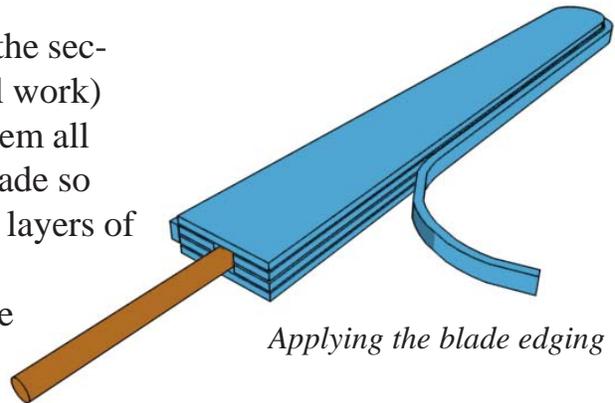
*Both halves attached to the core*

### Step 3: Blade Edging

A. Take some strips of camp foam (the sections you cut out for the core will work) and rough up one side and glue them all the way around the edge of the blade so that they cover up the two middle layers of foam.

B. Its not really possible to press the blade after this step, so I usually use some scotch tape to hold it in place till it sets up.

C. Take your length of PVC insulation and split it in half using my extra cool insulation splitting tool. To make a insulation splitter cut a groove on opposite sides of a 1" PVC coupler wide enough for a hacksaw blade or bread knife. Push the insulation into the coupler and use the grooves to guide the blade so you can split it perfectly in half. Be careful if you got insulation that has a half cut slit on one side. If you don't keep this lined up and split the insulation right along this cut you will end up with uneven insulation and half of it will be useless for having a slit on it that will weaken your weapon



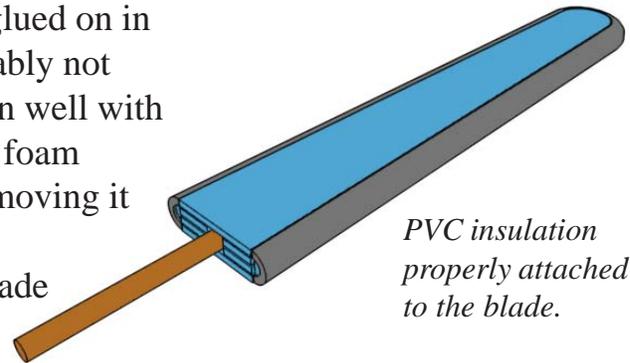
*Applying the blade edging*



*The ever-useful insulation splitter*

**D.** Apply DAP along the edge of the blade and along the edges of the PVC insulation and carefully wrap it around the edge of the blade. Because of the strip you glued on in Step 3-A the insulation will probably not want to stay glued so tape it down well with scotch tape since it comes off of foam pretty easily since you will be removing it when the foam sets up.

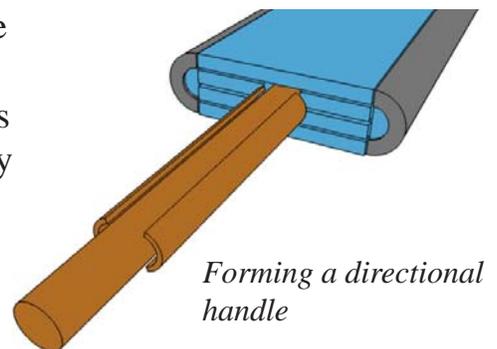
**E.** I find it beneficial to press the blade once you have applied the scotch tape to keep the insulation lined up, plus it helps keep the scotch tape in place while it holds the insulation in place. I would let the blade stay in the press for awhile, 30 min or more since unless the DAP is completely set up the insulation will want to pull away from the blade.



#### **Step 4: Finishing up.**

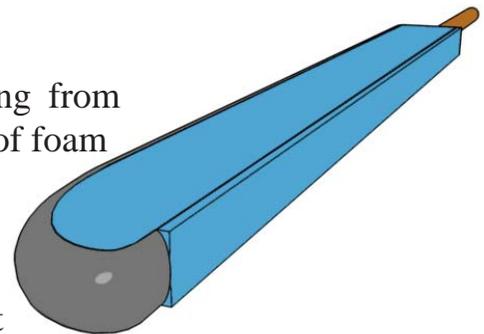
**A.** I like to apply a layer of Packing tape to the top and bottom of the blade. This adds some strength to the blade and makes it less likely to be gouged during battle. Only apply packing tape to surfaces you will not be hitting anyone with, in this case just the top and bottom of the blade.

**B.** Since a flatblade has to be used like a real sword, its quite beneficial to make a directional grip. I usually do this by splitting a small section of bamboo in half and taping a half to each side of the handle.



#### **Step 5: Variations: The Single Edged Sword**

**A.** To make a single edged sword wrap the edging from step 3-A only to the tip. Then Add a section of foam the entire width of the blade on the backside of the blade. Leave about 1.5" uncovered at the tip. Wrap the PVC insulation around the blade but actually wrap it around the tip a bit so it butts up against the sheet you glued onto the backside of the blade.



## **Congradulations you are done!**

Go on to make a cloth cover for the blade and finish up the handle and add quillions and pommel. I plan to make guides on ways to do this too but its really up to you when it comes to this since they are mostly for looks. I do highly suggest some kind of cloth cover though since camp foam is very strong unless gouged. The sword should last a long time if used properly and should be a blast to use.

I do suggest checking the tip often though since the only problem ive ever had with a flatblade was the tip bending over to the side as I stabbed and the core would slowly wear away the foam. This can be prevented by putting the core as close to the tip as possible (while still being legal). The packing tape also helps to prevent this, as does sanding and rounding the ends of your core so that it has no sharp edges with which to eat away at the foam during use.

Thank you for taking the time to see how obsessive I am about my amtgard weapons and I hope you enjoy your new weapon, may it serve you well.

**Questions? Comments? Complaints?  
Contact me at**



This guide has been brought to you by Finch. If you would like to distribute it to anyone just give me credit and I'll be happy.

A salute goes out to Sven who originally developed the flatblade technique and taught it to me. I've made plenty of little additions but the original idea is his.