

Division 1 Pool Noodle Weapons

These short swords, a great sword and a pole arm are all were made during a televised football game, start to finish.



Division 1 uses touch calibration. Pool noodle foam is great for this in that it is stiff enough to be felt but still gives under pressure. It's also quite inexpensive. The following is a guide to making them.

Tools:

Hack Saw

Scissors

Tape Measure

Sharpie

*And 60 grit sand paper if using rattan

Materials:

2 pool noodles

5' piece of $\frac{1}{2}$ " Siloflex (or $\frac{3}{4}$ " shaved rattan)

5' piece of $\frac{3}{4}$ " Siloflex (or ~ 1 " shaved rattan)

5' piece of $\frac{3}{4}$ " PEX (or ~ 1 " shaved rattan)

Pipe Foam Tape

$\frac{3}{4}$ " CPVC caps, qty. 2

Grip Tape for the hilt/haft

Thick Gray Duct Tape

Thin Duct Tape (any color)

Thin duct tape for the blades and edges (any color)

Paracord for Lanyards

We brought home pool noodles from Wal-Mart and Five Below

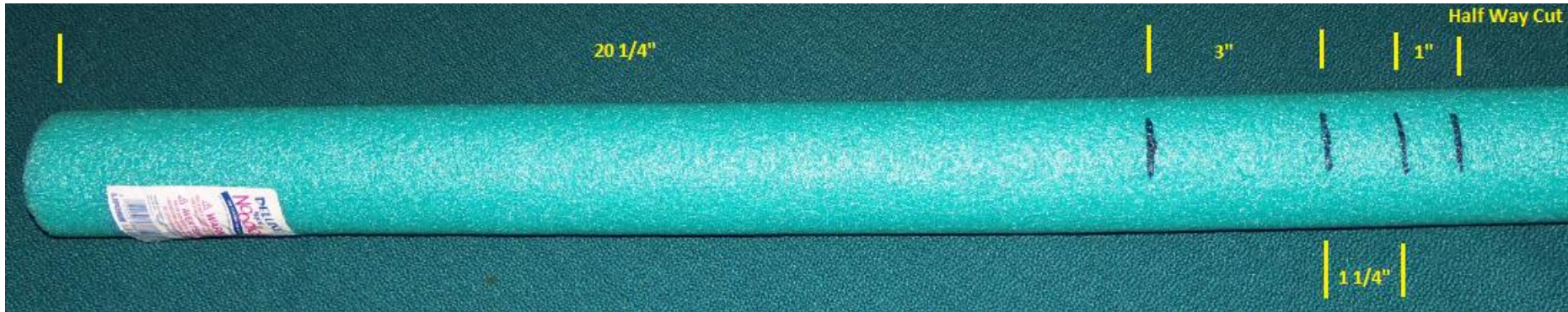


Both pool noodles had “walls” of foam more than $\frac{1}{2}$ ” thick. The “Blue” noodle had a smaller hole in the middle, and was a bit softer. It was also a bit shorter than the “Lime” noodle. The holes matched up well with Siloflex nominal sizes $\frac{3}{4}$ ” and $\frac{1}{2}$ ”, which we bought at Lowes. The $\frac{1}{2}$ ” size is (experimental) for Division 1 only. If your Kingdom does not use Siloflex or PEX, then rattan of the same exterior dimensions should be fine. Using shaved rattan, rather than “skin on”, will save you steps in preparation which are not detailed here.

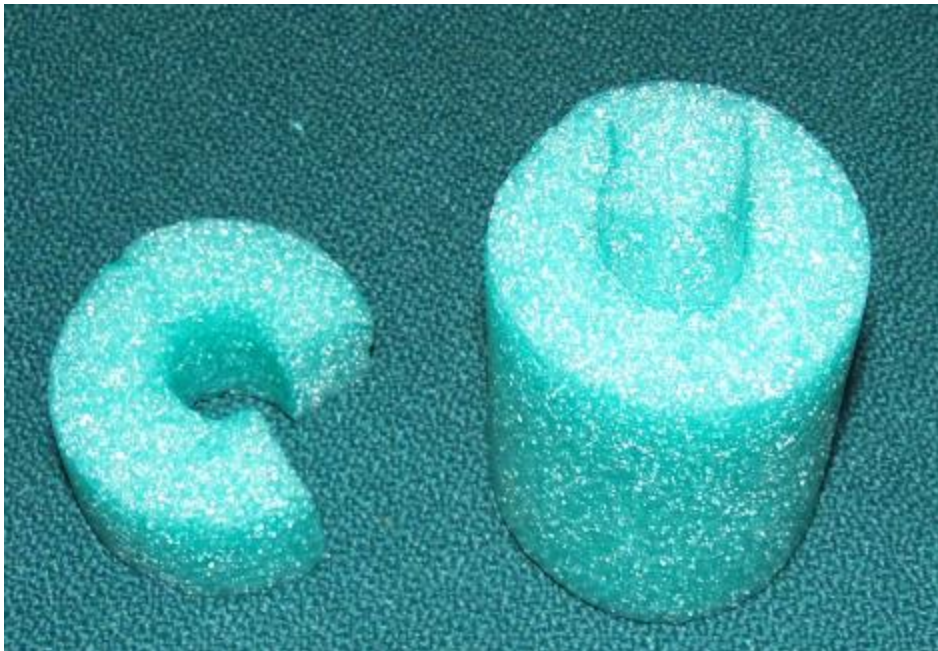


The perfect fit allowed us to avoid effort to make the core fit firmly inside the foam and saved us a lot of time. You will find Siloflex like this at the big box stores in 5’ staves. Don’t buy the rolls of Siloflex or PEX.

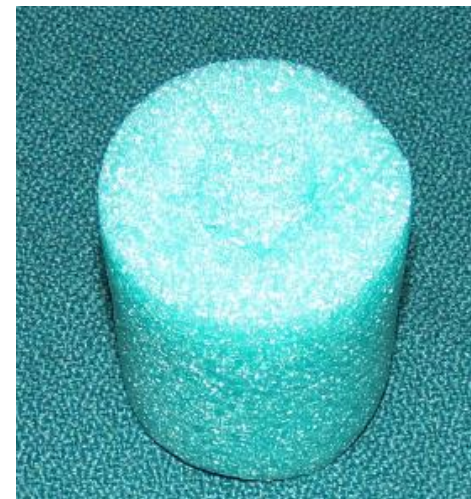
The Blue pool noodle looks like short sword material.



The noodle was cut in half. An inch was taken off the end for use inside the thrusting tip. Another 1 1/4" was cut for use in the pommel and inside the thrusting tip. The 3" section is for the pommel. The remainder of the noodle is for the blade and tip. A 20" section of the 1/2" Siloflex will be used for the core. The same design is used on the second sword.



We took about 1/4 of the 1 1/4" section and rolled it into the end of the pommel, then pushed it inward until it was flush.



The Siloflex core is prepared, and the sword assembled.



A hack saw will easily cut Siloflex to length. A larger toothed saw is better if cutting rattan.

The ends were duct taped after we de-burred and rounded the edges with the scissors. The tape color doesn't matter, but if you have thick duct tape, or maybe strapping tape, use that. One thick layer is fine, or two if it is thinner tape. If using rattan, gently round the edges of the cuts with sand paper. The rattan ends do not need taped. The core is now finished.

We used the core as a ram rod to stuff the other small pieces of foam into the end of the tip. We had to trim the foam to fit, and then pushed almost all of it in. The foam filled the tip 8 1/4" deep. This meant the core only went into the blade 12".



The pommel was stuck on the core, so that the core went in about 1 3/4". The assembled sword is about 29 1/2" long. If this is too long, keep in mind that there is at least 5" that could be cut from the thrusting tip without any complication.

Two swords and their debris.



There was still 20" of the ½" Siloflex left over for the future.

We stopped work on the Blue and started on the Lime.



More thinking was needed.

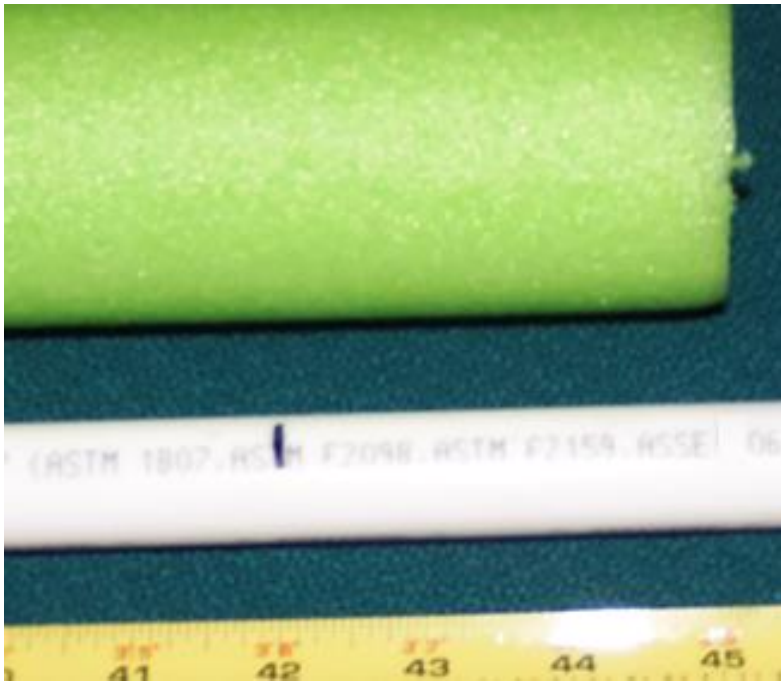
We had 54 ½" of Lime Pool Noodle to use.

Since these are for Division 1, neither weapon could have a butt spike. We needed a 3" cut for the pommels, or butt, of each weapon and a 1 ¼" cut for material to fill them. The tips were both going to be closer to 3" in these weapons, so we cut one more 1" piece to share between the thrusting tips.

The foam we had left would need to make the blades and tips of both weapons. We decided to make the pole arm blade and tip a total of 20". The rest, about 26", went to the great sword.



We cut our 60" long piece of ¾" Siloflex down to 54" for the pole arm. The ends were taped. It will have a 3" pommel, a 36" haft, and a 20" blade and tip. This will leave us a little short of the maximum length of 60".

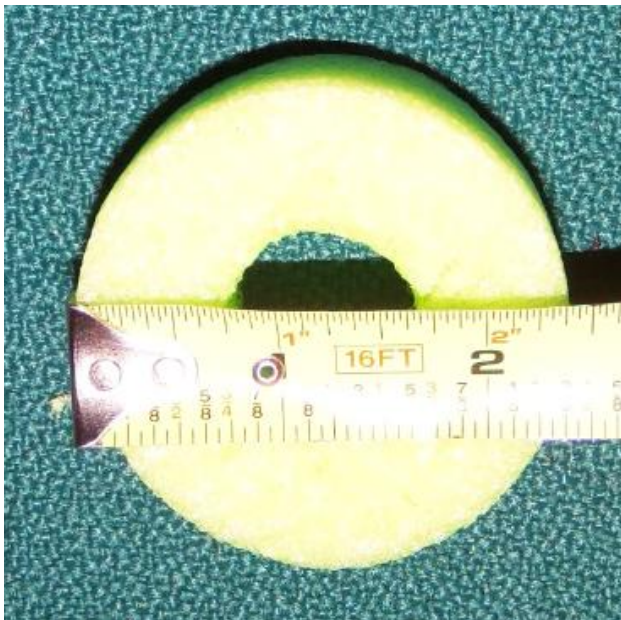


More core material was needed.

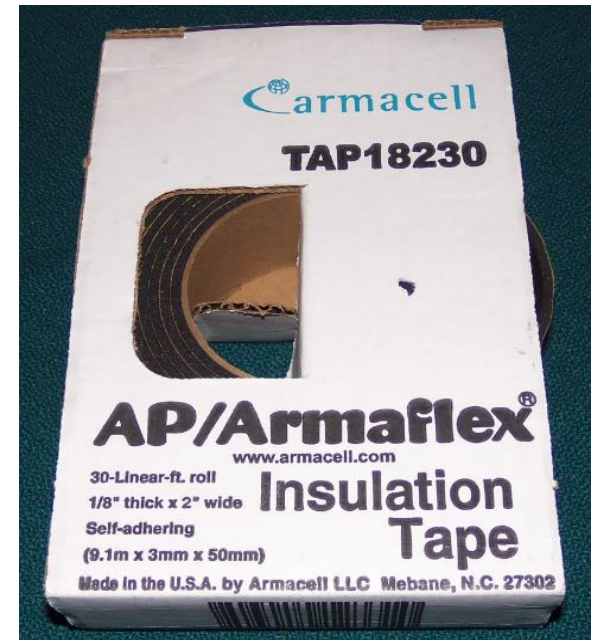
We ran out of Siloflex at this point and decided to make the great sword out of $\frac{3}{4}$ " PEX, which we had also bought at Lowes. A piece about 42" long was cut from the 60" stave. This should give us a sword about 46" long, with a 3" pommel, a 17" hilt, and 26" blade and tip.

CPVC $\frac{3}{4}$ " caps fit perfectly over the ends of $\frac{3}{4}$ " PEX, as do some $\frac{7}{8}$ " chair leg caps. Lowes has the CPVC caps I taped on the ends. We used pipe foam tape, from Home Depot, to wrap half way around the core in a few spots to get a firm fit inside the noodle. See the diagram at the end for an explanation.

Before taping, we checked the diameter of the noodles and found the thrusting tip was going to be too small.



A thrusting tip needs to be $2\frac{1}{2}$ " across. The pool noodles were both undersized by $\frac{1}{8}$ ". To increase the size, we wrapped them with one loop of the same pipe foam tape. The tape will add $\frac{1}{8}$ " all the way around and fix the problem. The end result is a diameter of $2\frac{5}{8}$ ".





They are ready for tape.

All four weapons have had their tips enlarged and are ready for taping. The pommels won't need enlarged, as they are already more than 2" in diameter and won't be used for thrusting.

We decided to use a base layer of white. We used the thinnest white duct tape we could find. The pool noodles are a bit stiffer than most pipe foam, and we don't want to add to that stiffness.



Tape applied.

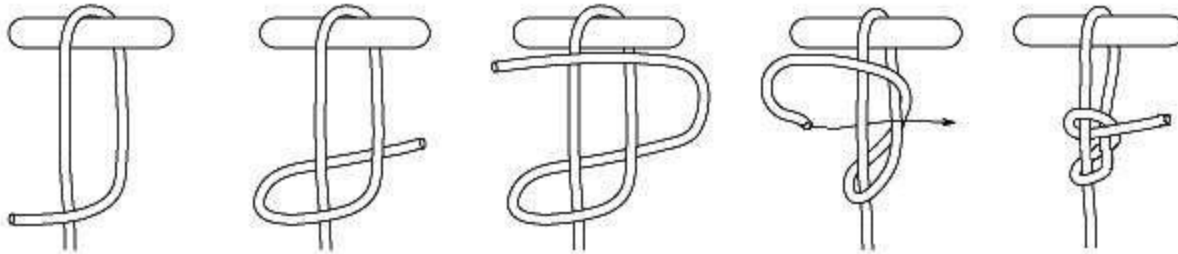


The majority of the blade and a tip is covered by the white base layer. A small strip is not yet covered, which is where the contrasting “edge” tape will be applied.



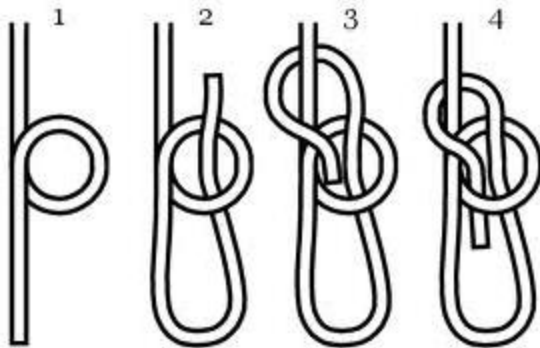
The short swords were finished in the colors of the local shires of Owlsherst and Silver Rylle . The great sword is colored in Montvale's colors. Their ermine is the white blade with a black “tip”, while the hilt is sable and or. The pole arm was made argent and sable for Blak Rose.

Lanyards are needed on the short swords.



Shown on the left is a buntline hitch. It's a clove hitch tied around the rope and progresses toward the hilt. Once tight to the hilt, it tends to jam. This is useful for securing synthetic cords and ropes.

Below is a bow line knot, and steps to use it for the hand loop.



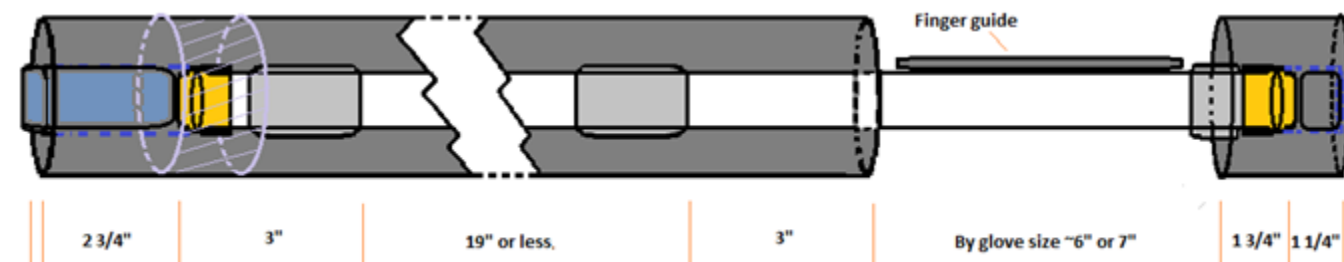
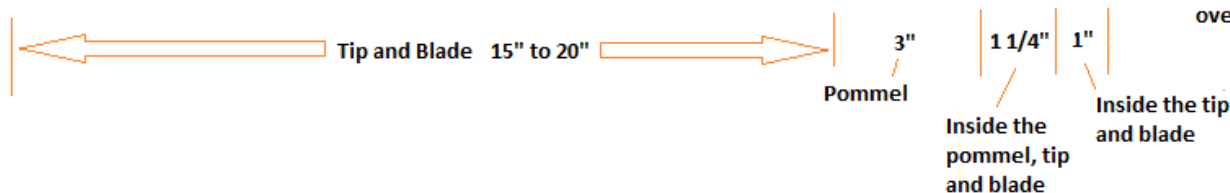
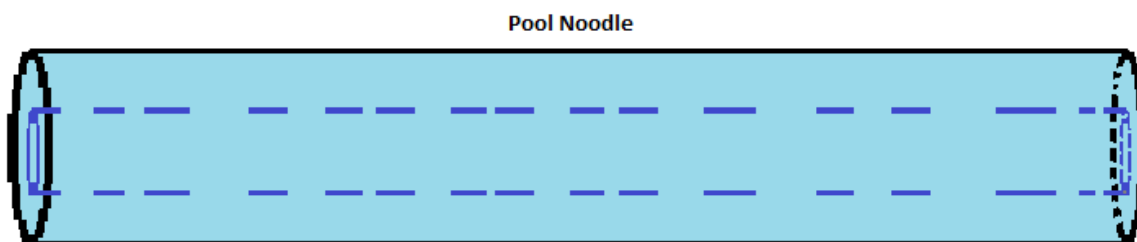
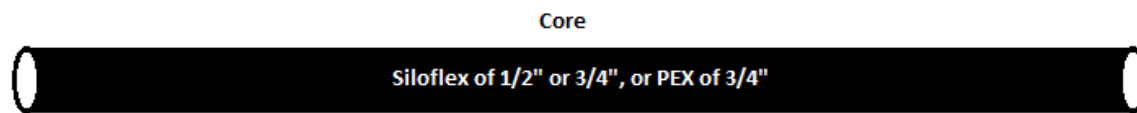
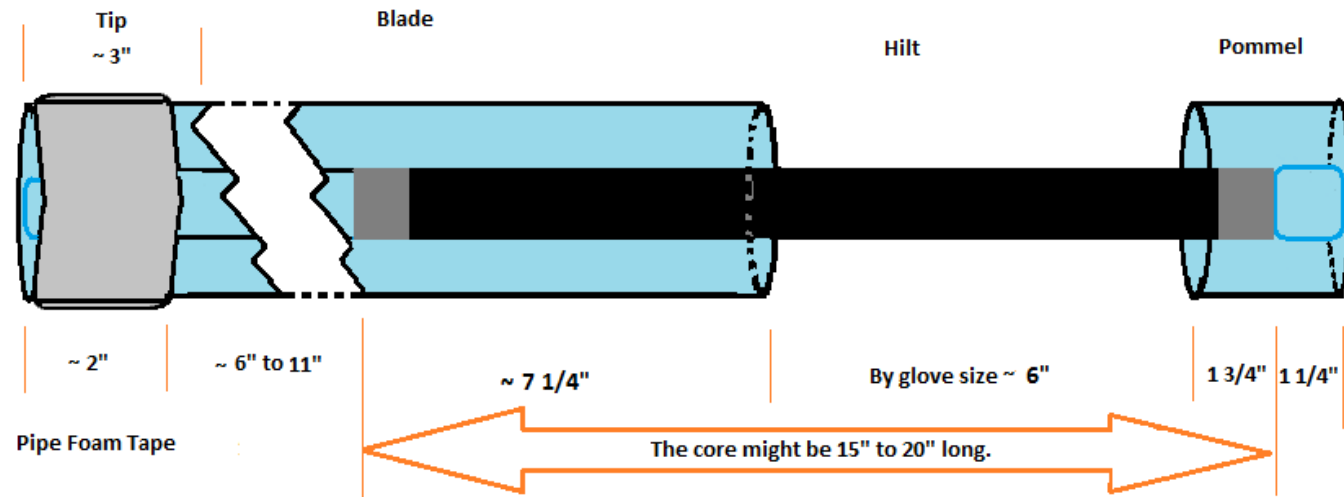
To secure the paracord to the sword hilt I normally use a buntline hitch and tighten it. A double half hitch will do, but they unravel easier. For the hand loop, I usually start with a bow line knot, which forms a small fixed size loop. I then pull the paracord through it, which makes a loop that can easily be made large enough to go over a glove and then pulled smaller around the wrist. The knot and pulling the loop through it are shown on the right. The cord has to be long enough not to cause problems swinging the sword, but not so long that it might be tripped over when the fighter is “killed” and lies with their weapon on the ground.

Costs for the materials used (2013):

2 pool noodles	\$2 for the pair
5' piece of ½" Siloflex	\$2.50
http://www.lowes.com/pd_24293-124-2-75160005_0_?productId=3572778&Ntt=160+psi+water+pipe1/2%E2%80%9D	
5' piece of ¾" Siloflex	\$3
http://www.lowes.com/pd_24293-124-2-75160005_0_?productId=3572778&Ntt=160+psi+water+pipe3/4	
5' piece of ¾" PEX	\$3
http://www.lowes.com/pd_226313-61002-APPW534_0_?productId=3660004&Ntt=160+psi+water+pipe	
¾" CPVC caps	64 cents for the pair
http://www.lowes.com/pd_380027-1815-4147007RMC_4294765344_40_?productId=3583772&Ntt=cap&pl=1&currentURL=%3FNtt%3Dcap&facetInfo=	
Pipe Foam Tape	\$8
http://www.homedepot.com/p/Armacell-2-in-x-30-ft-R-1-Foam-Insulation-Tape-TAP18230/100539553	
Thick Gray Duct Tape	\$5
Thin Duct Tape (White in the example)	\$3.50
Thin duct tape for the blades and edges (varied)	\$3.50
Grip Tape for the hilt/haft (Play it Again Sports)	\$3 per color
Paracord (Home Depot)	\$3

If you have the tools, that's comes to \$38 to make four weapons. It could be \$5 less if you use only thin duct tape in layers on the Siloflex core ends, and less still if you skip the CPVC caps for the PEX core. For the cost of one more pool noodle, the left over ½" Siloflex could be made into a third short sword.

Rattan pricing varies, but at large Wars a ¾" to 1" diameter stave of shaved rattan, of 9' length, is about \$15 as of 2013. The length of core material needed for all four weapons will require two staves, which will add \$21.50 more, without considering the cost of attending the event.



A sword kit for use in Division 1:

The core might be Siloflex of 1/2" or 3/4", or PEX of 3/4", as fits the child's hand and the inside diameter of the pool noodle.

The Siloflex and PEX may be just taped over the ends, or the PEX might be covered with a CPVC 3/4" cap. Tape over the cap, or glue it on.

Pool Noodle, from 22" to 27", as close to 2 1/2" outside diameter as possible, with a small inside diameter.

1/2" siloflex is only allowed in Division 1. If made from 3/4" material, it is legal in any division, but is only practical for touch calibration in Division 1.

Pipe foam tape as needed. While the foam is shown at the tip, it might be needed to take up space on the inside of the noodle. See other guides for this approach.

A heavy grade duct tape for the ends. Two contrasting colors of thin duct tape for the base color and blade/tip markings.

Grip tape which matches is a nice touch for the hilt.

Tools

A pair of scissors to cut tape and foam

A fine toothed saw, like a hack saw.

The Division 2 & 3 PEX core sword at left uses pipe foam tape to tighten the fit inside the gray foam. The CPVC caps are shown in gold.

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Revision 09/19/ 2013

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Note that at this time ½" Siloflex is considered experimental, but we do not anticipate any problems with it. It is no smaller in size than the permitted rattan minimum diameter. Because of this it fits tiny hands well.

Not all SCA Kingdoms will permit Siloflex or PEX. Their primary advantage is availability and cost. For Division 2 and 3 weapons of any length, rattan remains the best core material as it is more stable at summer temperatures and less flexible in general.

Pool noodle foam is not ideal for Divisions 2 and 3. The longer tip on these swords will bend over and break off. The shorter tips of the pole arm and great sword are not very soft, but as Division 1 does not use face thrusting, this is not a big problem. The same approach can be used with polyethylene (rough skinned) closed cell pipe foam for all weapons, but the cores of the short swords should be lengthened to keep the tips between 2 ½" and 3". Note that the blue material in the thrusting tip of the PEX Division 2 and 3 sword shown on page 12 is rubberized (smooth skinned) closed cell pipe foam which is positioned within the polyethylene foam. The rubberized foam compresses nicely in tips.