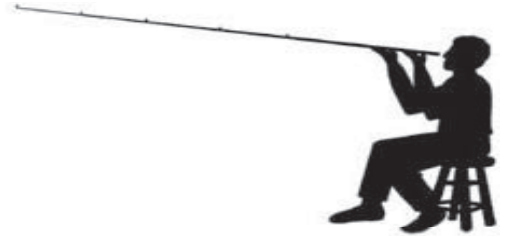


# Finishes

by John Britt



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## Custom Rod Builders Guild

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One of if not the most discussed items in rod building. Which one to choose and how to apply. The good news is they all work the bad news each has it's own quirks and may need slightly different techniques to achieve consistent satisfactory results. Always try and follow manufacturers directions carefully.

General rules:

Two equal parts means exactly that! –Not close or approximate- syringes are for the most part the most accurate measuring system.

Mix 3 CC of part A to 3 CC of part B or another way 3 CC of Resin to 3 CC of Hardener-why 3 CC? –it has been found that this is the best overall amount to use and will cause the least number of problems- remember never less then 3 CC. Using less adds the possibility that any error in measuring increases the chances of an improper cure.

Perhaps the best mixing container is the simple glass shot glass- large enough to hold ample material but small enough to enable thorough mixing. The finish should be mixed or really folder for a period of not less then two minutes, scraping the sides of the glass, if done carefully the finish should be clear with no visible haze and hopefully very few if any bubbles.

Applying- there are many systems in use in regard to how to apply finish the Key is to develop a system for yourself that will give you constant high quality results.

Somewhat devil may care system:

Mix the finish in a cup vigorously using a wooden pop sickle when finished with the mix use the pop sickle to apply finish. Blast with a propane torch sounds terrible but the Young lady who demonstrates the system gets consistent excellent results.

Ultra cautious system:

Use a shot glass- very carefully fold and stir using a thin metal spatula when mixed apply using a very expensive Sable brush, use alcohol lamp to break the very few bubbles produced again the individual gets excellent results.

Commonality: these are probably the most wildly separate systems I have seen but they do have some things in common both thoroughly mix exactly equal parts of the finish.

About 99.9% of finish problems are the result of improper mixing and measuring.

Excuses for poor results:

High Humidity- humidity has very little effect on finish.

To hot or to cold- temperature will effect the cure time but unless subject to extremes will not effect the final result.

BAD BATCH- common term, which really means we fouled up somewhere not really the responsibility of the finish.

Spatulas or brushes which is better here is another example of why we need to develop our own system-either can give excellent results and the result is determined by us in how well we have developed our system. Personally I prefer a fairly good quality soft bristle brush for custom work but use the cheap disposable ones for all my repairs. Both seem to work well for me.

Bubbles the bane of finishes, where do they come from?

1<sup>st</sup> the process of mixing can and will produce bubbles- slightly warming the two parts before mixing can help in reducing the amount produced- pouring the finish out on a flat surface will further reduce them and extend useable pot life.

2<sup>nd</sup> when the finish is applied to the thread it displaces the air since the air is lighter it tends to rise to the surface forming bubbles. The area at the end of the foot near the guide ring can be the most susceptible location for this type of bubble. This area should be sealed by finish left unsealed it will cause problems later.

3<sup>rd</sup> the brush air is trapped in the brush bristles if used to briskly the air escapes usually forming a clot of bubbles on the surface. Dabbing with the brush will also cause this; the idea is to allow the finish to flow off the brush onto the thread. The resulting bubbles can be removed by applying heat at least on the finishes that allow heat to be used.

Heat- we want to use only enough to break the bubbles never so much as to damage the blank.

I wish there was some simple all encompassing system to pass along but it simply doesn't exist.

Some thoughts and tips:

The finish manufacturers try to provide simple effective products and it is up to us to determine the system we find easiest to use. Read directions, question the manufacturers and ask further questions on the message board BEFORE using any new product.

Unless you have considerable time to turn the rod by hand you will need a turning motor- the RPMs vary greatly and deciding what speed to use really is a personal decision. The Flex Coat 6 and 18 RPM motors are a good start. - Many choose other options motors from BBQ grills, microwave turn tables etc but I would avoid anything under 6 RPMs. Virtually all the common finishes used are self leveling and the rod needs to turn in order for the finish to cure properly with no sags.

Curing time –most finishes will cure around 95% in 24 hours at normal room temperature. Heat or cold will alter this, a full Cure I would wait a complete week before flexing the rod or using. Some complaints of finish cracking have occurred when not enough time is allowed before flexing the rod.

We have high builds low builds and everything in between. Using a high build finish does not mean that we must use only one application of finish, it has been found that applying multiple thinner coats affords a more desirable finish.

Applying finish- try never to rush –seems this is one of the most common problems among the newer builders, after all the time and work put into wrapping they can't wait to get the finish on. Allow sufficient time for applying finish; apply at your own pace- your speed will increase with time and practice.

Some can apply finish freehand but for most of us a block to rest the arm on is a great aid in getting straight edges. Finish is at it's best when first mixed flows easily, as time passes it begins to set up and at this point mild heat can extend the useable pot life but if you find it not flowing and it is setting up to quickly after heating discard the remainder and mix a new batch, finish is relatively cheap if you consider all the work put into the rod. Trying to extend the pot life to far will lead to problems. Never use a dry brush on applied finish any loose bristle will be picked up by the finish always uses a fully loaded brush.

I do hope this information will prove useful to some , remember each finish may have slightly different qualities that we may want and the only sure way of getting the quality we desire is PRATICE.

John Britt