

Finishing Approaches for Woodturners

Sanding

Rules for Sanding

Use a bright incandescent light to see the scratch pattern on the wood.

Keep the sandpaper sharp and clean

- Use quality sandpaper. The grit on the cheaper papers is not consistent and you get chunks of 80 grit on your 240 grit disk. No matter how hard you work, you will not get rid of all the scratches as you are constantly adding new ones. The grit on quality sandpaper is also better and will stay sharp much longer.
- Use no-load sandpaper. It is treated to keep the sanding dust from sticking. Thus it lasts longer.

Remove all tool damage with coarser grit before moving to finer grits

- Aim at avoiding tear out in the wood. With good tool control there should be little or no tear out, which dramatically reduces sanding costs and time, and preserves the shape of the turning. If you get tear out, do not be afraid to use coarse sandpaper to remove it. On localised tearout areas, remove the tearout by hand sanding.
- Sand through progressively the grits up to 400
- alternate turning directions of the lathe between each grit
- Choose the sequence of grits using the following rule: When choosing the next higher grit, do not jump more than half the number of the previous grit. 120 to 180 is good because half of 120 is 60. Add the two numbers together and you get 180.

Sequences to use could be:

80, 120, 180, 220, 320 and 400

OR 100, 150, 220, 320, 400

- Use the largest sanding disk that is practical. Five and six inch disks are great for use on the exteriors of larger bowls as they help remove any ripples. On smaller bowls, power sand with a 3" disk on the outside and 2" disk on the inside.
- Hand sand with 320 or 400 grit to remove any residual scratches.
- Hold the sanding pad as flat as possible on the wood to avoid getting scratches from the edge of the disk. Alternatively, consider using wavy-edged disks. However, be aware that the wavy disks will obliterate details such as beads.
- Sand to higher grits when you don't want dye to soak in too much or when you leave the wood bare/apply just beeswax.
- Stop and hand or power sand difficult spots, such as reverse grain and tear-out.

Reasons to move to higher grits

- The higher the grit you sand to, the glossier the final finish will be

Remove all sanding dust before going to the next finer grit

- Blow off with compressed air jet
- As a last step before putting on the finish, clean with acetone

Sanding speed

- Avoid getting the paper hot, which will case harden the wood and cause heat cracks.
- Most turners get the results they want with slow-speed power sanding. This involves running the lathe as slowly as possible and running the power sander at about 600 – 800 rpm. This technique is absolutely necessary if the bowls have gone out of round. You cannot use high speed in that case.

- Some production turners do high speed sanding. This involves running the lathe at 500 rpm or slightly higher on a smaller bowl, and running the sander at 6000 rpm. Angle grinders are usually modified to get this speed with a rheostat to slow them down from their traditional 11000-13000 rpm. The lathe speed helps keep the wood from getting hot. However, a VERY light touch with the sanding is also mandatory to keep the wood cool. This technique can cut sanding time in half and give as good a result as slow-speed sanding – sometimes better. High-speed sanding requires high quality sandpaper, but is cheaper in the long run, as the paper lasts longer. Many people using this system like Roloc-style sanding disks and pads that are meant for metal. Ceramic-based sandpapers star in this type of sanding. The 6000 rpm speed is necessary to get the grit on this type of this type of disk break down and stay sharp. With slower speeds, the disks quickly dull.

Sanding approaches and when to use them

Wet sanding is a very effective way of dealing with dust and eliminating difficult grain patterns. The slurry can also be used to fill microscopic cracks that would be impossible to fill any other way. This is done when applying oil finishes. Put a coat of your chosen oil finish on the turning (the finish can be cut with mineral spirits or turpentine). Turn the lathe on slow and sand. Work your way up through the grits, removing slurry and adding fresh oil. At the end, wipe out the bowl and coat with your chosen oil. It is a good idea to keep the lathe running slowly, as well as covering the bed of the lathe, to reduce any spray.

Sanding with Wax. is also a very effective in dealing with difficult grain patterns. It also keeps dust down. Mix 15 per cent sheet beeswax with 85 per cent mineral oil. Melt together in a double boiler. Slop the mixture on the turning and sand. Add more of the mix if necessary. As you reach 320 grit, you should be beginning to dry sand. This works with oil finishes and varnish but not with water finishes unless you get all the wax off.

Products

Product

Supplier

Recommended by /

		Comments
No load sandpaper	Almost all stores	
AstraDot rolls and disks	Woodchucker's Supply	Bill Neddow
Norton "Dry Ice" disks	The Sanding Glove	Bill Neddow
Unedda disks	Lionel Bedard	Bill Neddow
Arbalon sanding disks	The Sanding Glove	
Gold Line disks	Vinces WoodNWonders	Bill Neddow

Advice

By

Bill Neddow

Advice

If you want to try high speed grinding, an inexpensive 4 ½" angle grinder will do, if you slow it down by plugging it into a router speed control rheostat. Turn the rheostat to half speed, and this should give you 6000 rpm.* Soft Velcro-backed sanding pads to fit the 5/8 inch arbor of the grinder are available from Sandmate (www.sandmate.com), as are adaptors to go from this arbor to the 1/4 x 20 size arbor needed to thread into the screw on a Roloc-style backing pad. The arbor adaptors are also easy to make at home.