



## Varnish application using a brush

A thin varnish brush with fine synthetic bristles works best with water-based varnish. Applying the material in thin coats prevents pooling and bubbling, but there should be enough material to flow out so that brushstrokes disappear. The brush should always move in the direction of the grain, and the stroke should begin on an unvarnished part of the surface and end on a wet area. Long, straight strokes are better than short, arched ones. If the material foams or bubbles, brush out the bubbles and spread the varnish so that they don't reappear. Penetration may be uneven, so avoid leaving with insufficient coverage.

Do not shake water-based varnish containers as this will generate bubbles which will produce bad results.

Rehearse your finishing sequence to allow handling of a piece in process and to ensure that the most visual surfaces, usually the top and front, are left for last to ensure maximum attention.

In general, begin with the interior or bottom of a project, orienting the surface at hand horizontally whenever possible to allow the finish to level out. Then move to the less evident exterior surfaces, such as the sides of a cabinet. Work discrete sections one at a time, such as a panel face. Leave the top surface of a project for last to ensure the best levelling as the unit sits and dries.

In the case of complex surfaces such as frame-and-panel assemblies, brush the interior edges of the frame first, moving outward to the flat areas. There are no hard and fast rules to finishing sequence. Just calculate the approach as best you can for each project.

Before varnishing, prime the brush bristles by immersing them in water, and then shake off the excess. Priming conditions the bristles for work and eases brush clean up.

Take care in warm conditions, water based varnish dries very quickly and you can lose your wet edge.

Whenever water or any stain or finish that contains water comes into contact with wood, it causes the wood fibres to swell, which is called grain raising or raised grain. After the water has dried the wood feels rough to the touch, and thinly applied finishes also feel rough.

Raised grain occurs no matter how fine you sand the wood before wetting it. Because you can't prevent raised grain if you use a water-based product, you need to deal with it so the final finish comes out smooth. Dampening the surface with a mist of water or a damp cloth, allowing it to dry and re-sanding will generally overcome this.

Once sanded smooth, the grain will not raise again nearly as much as it did with the first wetting.



When applying water-based varnish with a brush, it is important to prepare the surface first. Make sure that the surface to be covered is clean and free of dirt, dust or anything that might prevent the varnish from bonding to the surface.

You can do this by removing any dirt or debris with a brush or vacuum. Then lightly sand the surface with fine-grit sandpaper to create a smooth finish.

After that, wipe the surface down with a damp cloth to remove the dust particles. Once the surface is clean, you can begin to apply the water-based varnish.

Always test on surfaces before application to ensure compatibility.

How to keep brush marks from water-based varnish...

The key to preventing brush marks when applying a water-based varnish finish is to use the right brush and work in controlled strokes.

When selecting a brush, use a synthetic brush with fine, soft bristles. Dip the brush in the varnish and gently tap the sides to remove excess material. To apply the varnish, use a very light touch and work in slow controlled strokes along the direction of the grain in the wood.

This will help ensure uniform coverage. Avoid back-brushing, or running the brush bristles over areas that have already been applied, as this can cause unwanted brush marks. When applying successive coats, be sure to feather the edges between new and old layers to create a smooth, uniform coat.

Allow each coat to completely dry before starting the next. Finally, be sure to clean the brush thoroughly with water and soap and then thoroughly rinse the brush with warm soapy water.

This will help to avoid brush marks and streaks caused by the build up of varnish on the brush.

Water based varnish dries very quickly, do not leave wet brushes for more than a few minutes or dry varnish will build up in the stock.

If you feel any stiffness in the brush, clean with Polyvine varnish and paint remover.

Stir varnish well, never shake it. Shaking can introduce bubbles, Pour the amount you think you'll need for the first coat into a separate, clean container.

Dip the brush into the varnish, loading it with an amount appropriate to the surface at hand. For example, to prevent runs and drips, just dip the tip when brushing edges. When coating broad surfaces, load enough for efficient transfer without dipping the bristles more than half of their length.

Begin with the edges because any spill over is easily cleaned up afterward. When varnishing an edge, orient the project with the less evident face downward, and angle the brush slightly so that one of its chiselled edges is doing the work. First brush outward toward a nearby corner, and then in the opposite direction to the other corner. Wipe away any drips.

If the adjacent panel face has not yet been varnished, it is easy to wipe away any drips with a rag wrapped tightly around your finger.

Wrap a clean rag tightly around your finger, and lightly drag it along the underside of the edge to thoroughly wipe away drips. If the faces are already finished, use a very lightly loaded brush to spread out any runs.



Avoid drips by brushing outward from the edge of a surface, never inward against it.

To varnish broad surfaces, begin at one edge of the panel, and work in a series of wide, continuous, overlapping sections. Starting a few inches in from one end, pull the brush smoothly across the wood. Next, working backward from your previous starting point, complete the section by moving in the opposite direction. Move slowly enough to allow the finish to flow from the bristles, but quickly enough to avoid puddles. As you progress, gradually increase the bristle angle to encourage the finish to flow out. As you complete the section pull the brush straight off the end of the panel to prevent the bristles from crawling down the edge. Apply each subsequent strip of varnish in the same manner, slightly overlapping the previous one.

In spite of careful work, some dripping and sagging are inevitable. Fix these areas after the coat of varnish has dried, removing drips by slicing them away with a very sharp chisel.



by Peter Wells, Polyvine Technical Director.