SANDPAPERS 101

Sandpaper is a sheet abrasive composed of particles of flint, garnet, emery, aluminum oxide or silicon carbide. These particles are mounted on paper or cloth in "open coat" or "closed coat" density.

Types:

Flint: The least expensive sandpaper sold, this is a grey material that wears down quickly.

Garnet: Is a much harder grit than flint and more suitable for woodworking, costs slightly more than flint paper.

Emery: This has a distinctive black colour, is generally used on metal.

Aluminum Oxide: Has a reddish coloured very sharp grit, used on either wood or metal.

Silicon Carbide: This bluish-black material is the hardest of all, and is commonly used for finishing metal or glass.

Steel Wool: Though not technically a sandpaper product it is often used for final finishing, comes in different grades, use degreased for woodworking. It is not recommnded to use steel wool for sanding if you are going to use water for raising the grain as small fragments may remain on wood, causing rust spots.

Classifications

Grit: Is identified by numbers from 600 to 12, the smaller the number the coarser the grit.

Density: ″Closed-coat" indicates that the grit covers 100% of the surface, "open-coat" indicates 50% to 70% of the surface is covered. "Closed-coat" sandpapers are designed for fine finishing, "open coat" does not clog as easily so is best for initial sanding and paint removal.

Adhesives: Hide glue is used on paper for light or medium duty, it is not waterproof so cannot be used on a wet surface, waterproof resins are used on paper meant for wet sanding.

Basic Sanding Procedures

Always start with the finest grade that is usable, if the sandpaper is coarser than required small grooves will be made in the surface and will have to be removed with subsequent sandings creating more work for yourself.

150 grit will smooth the surface enough for painting, if a painted surface is too smooth the paint will not adhere as well.

Continue sanding for clear finishes moving down to finer and finer grits until the surface feels as smooth as you think you can get it. Now you will have to raise the grain, soak a clean cloth in water wring it out and dampen the sanded surface. Let dry for 24 hours, it will feel fuzzy to the touch, sand with fine sandpaper until smooth, this should be repeated until the wood no longer feels fuzzy when dry.

Open grained wood such as oak may need a wood filler to create a super smooth surface, followed by the application of a sanding sealer to prevent the final finish from lifting the filler. Sanding sealer also prevents the excessive absorption of stain on fine grained woods such as pine.

If sanding by hand a sanding block makes the job much easier, these can be purchased or made from pieces of wood, curved shapes can be sanded using pieces of dowel with the paper wrapped around it.

There are three types of power sanders, belt, disk and finishing sanders, the belt and disk styles are not suitable for finishing work. The finishing styles have straight line or orbital actions, some are a combination of both with a selection lever. Straight line sanding is slower than orbital but does a smoother job. When using a

power sander let the weight of the tool do the work, do not push down on it.

Tips...

How to Make a Tack Cloth

A tack cloth is one of the best ways to remove dust and grit before applying a finish, to make one soak a cheese cloth in water, wring out the water, soak it in turpentine, wring it out again, drip enough clear varnish on the cheesecloth to make it evenly gummy throughout. Store it in a jar with a lid to keep it from drying out.

How to Make Sanding Sealer

Mix one part wood glue with ten parts water, apply with brush, let dry. This will raise the grain, sand smooth.

Save Your Sawdust

Before you start to sand a project empty the dust bag, when the bag is full empty it into a clean mustard or ketchup squeeze bottle. You will now have a supply of sawdust to match the project if you need to do the sawdust and glue fill. To do this squeeze some glue in the crack, then spray a bit of sawdust on it and work it in, repeat if necessary, remove excess.

Grit Size Chart

Retail Defination	Industrial Defination	Uses
Super Fine	600 600 400	Polishing metals, ceramics, stone and plastic usually wet. Not usually used for wood.
Extra Fine	360 320	As above.
Very Fine	280 240 220	Polishing finishes between coats, usually used wet.
Fine	180 150 120	Finishing bare wood.
Medium	100 80 60	First sanding for softwoods, shaping.

Coarse	50 40	Paint removal, rough sanding, shaping.
Very Coarse	36 30 24	Machine sanding bare floors, first cut.
Extra Coarse	20 16 12	Machine sanding floors to remove old coatings.