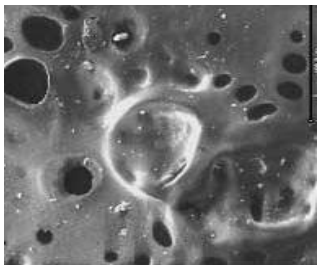
SOLVENTS

THE SECRETS TO SUCCESS

- You add solvents to your finishes to reduce the viscosity so that the material is thin enough to be properly atomized by your particular spray system. Fluid tip diameter, air cap size and the type of material feed are all factors in how much you have to thin.
- You also add solvents to compensate for the temperature and the humidity of the day.
- Faster solvents help with reducing viscosity or flow out.
- Slower solvents help with leveling.
- A smaller amount of a slower Retarder will not give you the exact same result as a larger amount of a faster Retarder.
- Your dry time is mostly set by the solvent's speed, not its quantity.
- Do not over-retard. Use no more than the amount necessary to get good results.
- Using more than 10% retarder may cause an increase in sheen.
- C161-1 Care Retarder is effective for reducing pin holes on deep grained woos like mahogany
- Any solvent speed less than 100 is considered a Retarder
- If you stock the Standard Lacquer Thinner and some of the Flow Enhance #1 you should be able to handle most conditions.

PROPERTIES AFFECTED BY REDUCTION



- Viscosity
- Orange peel
- Lapping
- Bubbling
- Blushing
- Dry Spray
- Sagging
- Wrinkling

This photo shows paint right after it was sprayed. The holes are the atomizing air and solvents gassing off through the surface. Notice that the surface is anything but flat; this is a result of all of the dots of atomized paint hitting the surface at high speed and being blown around by the atomizing air and incoming material.

2 factors are going to influence whether this paint will turn into a nice smooth finish:

- Was the paint reduced thin enough for it to flow out
- Was the reducer slow enough to allow the pinholes to seal up and the surface to level before it skins over

WHAT ABOUT THE WEATHER

Realize it or not, the weather plays a major role in your finishing operation. For instance, **a 12 degree change in temperature varies your drying time by a factor of 2.** If it took 30 minutes to dry at 84 degrees, then it will take 1 hour to dry at 72 degrees.

Low temperatures can cause problems such as **wrinkling**. When your first coat is applied, the finish skins over but does not dry through out its thickness. When sanding, there is the possibility of sanding thru this top layer, especially around edges and exposing this semi-soft layer. When the 2nd coat is applied, the solvents enter the lower layer through these sand thru's and get underneath the top layer and cause it to wrinkle as the 2nd coat dries. Post-catalyzed products are the most susceptible to this effect and it appears to be most frequent when you wait overnight to recoat. In cold weather, try recoating the same day or wait at least 24 hours. Allow pieces with sand thru's additional drying time before recoating.

Orange peel is the most noticeable problem in warm weather, and **blushing** can become an issue when it is warm and humid. A retarder will usually remedy both of these problems.

AT LOWER TEMPERATURES

- Material gets thicker, viscosity increases
- Material doesn't flow out well - slow as molasses in January
- Drying time increases.
- Do not use Retarder. Consider using a faster thinner.

AT HIGHER TEMPERATURES

- Material gets thinner, viscosity decreases
- Material flows out but doesn't necessarily level out.
- Drying time decreases if humidity is low.
- Consider using a Retarder with / or instead of thinner.

HUMIDITY

- At high humidity levels drying time increases
- The worst time to spray is when it is cold and damp

For consistent results use a viscosity cup and the appropriate reducers to adjust for changes in temperature.

Both cabinets and finish should be at the same temperature

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