

# APPENDIX I

## TROUBLESHOOTING FINISHES

Although many problems can result with the finish, the source is not necessarily the finish itself. Consult the following list for some of the most common problems and solutions.

**Problem: Excessive and early wear**

This can be caused by improper floor maintenance that fails to remove grit from the floor, or the introduction of water or strong cleaners. Pet nails and unprotected furniture legs also contribute to the problem. Proper maintenance requires regular dust-mopping with an approved wood-floor cleaner. If recoating is necessary, the owner should pay for it. Educate homeowners that the use of floor protectors on furniture will eliminate excessive and early wear.

**Problem: Discoloration**

Oil-modified finishes will amber in appearance and will yellow further over time. Wood in direct sunlight will change color and lighten over time. Recoating an oil-modified finish recoated with water-based finish will not stop ambering. Shading the floor can minimize lightening. Wood also changes color through oxidation.

**Problem: Stains**

Spilled water, pet stains and other liquids, including improper cleaners, can stain finish. Cloudy surface finish can be fixed by lightly rubbing with a proper cleaner and buffing, although some stains require screening and recoating. Some boards may need to be replaced.

**Problem: Alligatoring**

The finish pulls away from itself, causing ridges in the finish. Causes can include poor wetting of the finish, contamination of the finish, application under cold temperatures, application of a new coat before the previous coat has dried, application of a heavier coat than is recommended, or the use of thinners that cause the finish to dry too quickly. The solution is to screen and recoat after the finish has dried sufficiently. Sometimes a complete resand is required.

**Problem: Roughness**

The cause is often contamination of the finish during dry time, as well as by failure to screen or abrade between coats of water-borne finish. Moisture can also cause the wood grain to rise. If a moisture problem is evident, this must be corrected before screening and recoating. Sometimes a complete resand is required.

**Problem: Uneven gloss levels**

Insufficient mixing of finish prior to application, a contaminated finish applicator and uneven sanding or finish thickness are typical culprits. All require screening and recoating.

**Problem: Sticky board syndrome**

This occurs when excessive tannic acid or pH imbalance in the wood prevents the finish from adhering to the wood or curing properly. This is most common with oil-modified finishes and with white oak. When one board or several boards scattered throughout the floor will not take stain or finish, the most common solution is to repair the floor by replacing the boards and resanding.

**Problem: Peeling/Bubbles**

Bubbles and blisters in the finish usually mean that the floor was not screened or sufficiently cleaned between coats of finish, or the finish was overworked during application, or that soap or some other contaminant was not removed before coating. It can also be caused by the finish drying too fast as a result of hot spots from sunlight. Problems in the topmost finish coat can be screened and recoated, while cases of delamination require complete sanding and refinishing.

**Problem: Orange peel**

If the surface of the finish has a texture that resembles an orange peel, the problem may have been caused by rolling a finish that is not designed to be rolled on, which then dries too quickly. When that happens, the texture is "frozen" into place before the finish has a chance to flow out and level. The solution is to screen and recoat. Sometimes a complete resand is required.

**Problem: Fisheyes**

Called by many others names (crawling, cratering, holes, spots, flow marks), this condition can be caused by contamination in the surface. The new coat "crawls" away from the wet or contaminated areas, giving the appearance of fisheyes when the finish sets. It can also be caused by finish that has not been properly agitated. A disproportionate amount of flow and leveling agents may be put on the floor, causing a fisheyed appearance. The solution is to screen and recoat. Sometimes a complete resand is required.

**Problem: Bleed-back**

This condition occurs when excess stain seeps from the grain or from the spaces between boards. The most obvious cause is excessive stain application, but high-viscosity or highly pigmented stain may also be the culprit. The solution is to wipe off the excess stain and let it dry thoroughly before applying another coat. If finish has already been applied over bleed-back, a complete resand is required. Trowel filling a floor can help prevent bleed back.

**Problem: Application streaks**

This condition is usually associated more with water-based finishes, although it may affect other types of finishes as well. It often occurs when an improper spread rate is used, or if the finish is not applied evenly. Excessive air movement and high temperatures can also be responsible for causing the finish to dry too quickly, so that a wet edge of finish is pulled over one that has already dried. The problem can also be caused by applying a satin or semi-gloss finish that has not been stirred properly. The solution is to screen and recoat after the finish has dried sufficiently. Sometimes a complete resand is required.

**Problem: Poly beads**

Poly beads are droplets of finish that form along strip edges. They can be soft and sticky when first formed, but will become hard. They are generally associated with a slow drying condition and excessive sealer, stain or finish that seep into cracks. When soft, the beads can be smeared, leaving an unsightly appearance that may require screening and recoating. For hardened beads, the solution is to mechanically remove them with a sharp edge and, if necessary, screen and recoat. Do not attempt to screen the hardened beads. Make sure the polybeads are at the end of the cycle before adding more finish. The end of the cycle is two weeks after the last patch of polybeads, or when flooring is completely tight.

**Problem: Cratering**

Often mistaken for bubbles, this problem resembles craters on the moon. It is generally caused by contamination. The solution is to sand the crater out by hand-sanding and screen, pad and recoat. If the problem is severe enough, the floor may need to be resanded.