



Do your paint jobs suffer from "snap, crackle, and pop?" The following are some probable causes for common ailments.

## Troubleshooting Paint Problems In Your Shop

Courtesy: Sumter Coatings

- **Alligatoring** (Cross-hatch pattern of surface imperfections)

*Probable cause:* Coating over a soft film or incompatibility of topcoat and undercoat.

*Solution:* Remove failed coating and re-coat with compatible system for exposure conditions.

- **Cracking** (Splitting of paint by breaks through film)

*Probable cause 1:* Application of an excessive number of coats.

*Solution 1:* Remove failed coating by sanding or best method, and re-coat with proper system

*Probable cause 2:* Physical damage: heat, cold, exposure.

*Solution 2:* Remove failed system and replace with coating that will tolerate such physical conditions.

*Probable cause 3:* Stress or cracking of rigid substrate.

*Solution 3:* Patch all cracks and sand smooth, then re-coat.

*Probable cause 4:* Surface freezing of fresh latex coatings.

*Solution 4:* Re-coat when surface, material, or ambient temperature is above minimum recommendations.

- **Cratering:** (Holes or deep depressions)

*Probable cause 1:* Caused when bubbles break.

*Solution 1:* Sand surface and reapply coating at lower surface or air temperature, or add slower solvent to increase open time.

*Probable cause 2:* Water or moisture in spray equipment lines.

*Solution 2:* Sand surface smooth – correct equipment problem and flush lines before re-coating.

- **Crazing:** (Fine cracking in an overall pattern)

*Probably cause:* Stress or cracking of rigid substrate.

*Solution:* Patch all cracks and sand smooth, then re-coat.

- **Delamination:** (Loss of adhesion to substrate)

*Probably cause 1:* Topcoat incompatible with undercoat.

*Solution 1:* Remove failed coating by sanding and re-coat with appropriate primer.

*Probable cause 2:* Dry spray, dirt, and dust.

*Solution 2:* Remove loose coating by sanding, clean surface, and reapply coating.

- **Dry Spray:** (Over-spray - rough sand finish on spray applied coatings)

*Probable cause:* Spray particles being partially dried before reaching the surface.

*Solution:* sand smooth and make proper solvent adjustment to material.

- **Flattening:** (Gloss loss)

*Probable cause 1:* High humidity, damp surface, rain, or fog.

*Solution 1:* Re-coat when surface is dry and weather conditions are satisfactory.

*Probable cause 2:* Use of improper solvent or over-thinning.

*Solution 2:* Remove coating if adhesion is affected and re-coat using proper solvent.

- **Framing:** (Hiding and exterior or color variations where roller applied surfaces join work cut in by brush)

*Probable cause:* Uneven amount of film build between brush and roller work.

*Solution:* Remove and apply heavier wet film or additional coat on the new work.

- **Hiding:** (Poor – shadowy appearance of topcoat)

*Probable cause 1:* Low film build or insufficient number or coats.

*Solution 1:* Re-coat and apply heavier wet film.

*Probable cause 2:* Improper mixing.

*Solution 2:* Stir or agitate material thoroughly before use and keep in suspension during application.

- **Holidays:** (Missed areas)

*Probable cause:* Film dries too rapidly due to surface temperature above 90 degrees Fahrenheit.

*Solution:* Re-coat or touch-up.

- **Lap Marks:** (Color or sheen variations where one freshly painted area overlaps another)

*Probable cause:* Freshly painted area has dried before overlap was made.

*Solution:* Work smaller areas to reduce lap time or make proper material adjustments.

- **Orange Peel:** (Surface cracking that has a crosshatched pattern)

*Probable cause:* Insufficient automation.

*Solution:* Sand smooth and re-coat. Make proper solvent adjustments to the paint and adjust equipment to obtain a better flow and leveling of coating.

- **Pinholing:** (small holes in paint film)

*Probable cause:* Solvent migration through the paint film after the film has begun to set.

*Solution:* If pinholing is all over substrate, it indicates that the coating was applied and cured under adverse conditions. Apply a mist or thin coat to fill surface voids, follow with a full, wet coat.

- **Runs:** (Heavy or excessive buildup on surface of coating. Sags, curtains)

*Probable cause 1:* Excessive film build.

*Solution 1:* Sand runs smooth and re-coat.

*Probable cause 2:* Over-thinning.

*Solution 2:* Sand runs smooth and re-coat with properly thinned material.

- **Solvent Trap:** (Residual solvents remaining with the paint film)

*Probable cause:* excessive film build.

*Solution:* Test for hardness and adhesion. If film will not adhere or cure properly, remove and re-coat. Try to drive solvents out of film by force drying.

- **Wrinkling:** (A surface defect resembling the skin of a prune)

*Probable cause 1:* Excessive film build.

*Solution 1:* Sand smooth and re-coat at proper film thickness.

*Probable cause 2:* Slow drying conditions.

*Solution 2:* Sand smooth and re-coat when drying.

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