



TROUBLE SHOOTING GUIDE

AIR BUBBLES IN THE COATING

Air bubbles may appear in the coating as small defects or honey comb clusters. In nearly all cases, they are caused by air entrapment in the coating or applied film.

CAUSES

OUTGASSING

Air can escape from porous concrete and be trapped in the coating surface.

AIR MOVEMENT

Excessive air movement from vents, doors or other surfaces may cause flash drying and prevent air release.

TEMPERATURE / HUMIDITY

Too hot or too humid conditions can result in rapid drying conditions and result in air entrapment.

DIRECT SUNLIGHT

Floors exposed to direct sunlight can tack off before sufficient air release has occurred, forming bubbles.

IMPROPER MIXING

Do not entrap air into the coating by using fast speed mixing equipment or improper mixing procedures.

ROLLER COVERS

Too short or too long of a nap roller can cause air to be generated into the coating causing air bubbles.

MOISTURE / HIGH HUMIDITY

Some urethanes are sensitive to moisture in the concrete or excessively high humidity's, causing bubbles.

SOLUTION TO PROBLEM

Either roughen with 60 grit screen or break larger craters and fill with 100% solids material. Vacuum and apply another coat.

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AVOIDING PROBLEM

Apply a suitable primer to seal off the air in the concrete. Usually a low solids high penetrating primer works best.

Avoid any condition that can generate fast air movement across the coating. Always suck air out vs. blowing with exhaust fans for ventilation.

Wait until the temperature and humidity are within the ranges as needed to properly apply the material.

Close all doors where the sunlight can hit the floor and coat the areas exposed to the sunlight before the sunlight hits that area.

Use slow speed mixing equipment with a paddle type blade. If air is embodied into the material, let stand until air is released.

Use the appropriate length nap roller and apply without vigorous rolling. Use an air removal tool to remove air entrapped if necessary.

Make certain that the concrete is properly dried and the humidity is at the recommended levels before applying the coat.



FISH EYES

Imperfections in the coating that form circular areas that resemble fish eyes or similar looking flaws in the coating.

CAUSES

SILICONE CONTAMINANTS

Some manufacturing processes such as welding or spraying can deposit silicones on the floor causing fish eyes.

OIL / GREASE CONTAMINANTS

Oil or grease contaminants can cause the coating to function improperly and appear to have fish eyes.

SOLUTION TO PROBLEM

When minor fish eyes occur, use 60 grit screen; otherwise, completely remove coating. Solvent rinse and recoat the area.

Remove the coating by grinding stripping or other suitable methods and clean the substrate prior to recoating the area.

AVOIDING PROBLEM

Become familiar with certain types of operations and test areas prior to application. Properly prepare the substrate before coating.

Degrease surface properly and in areas where all contaminants cannot be removed, use a suitable or locking in primer.

PEELING OR DELAMINATION

The process of the coating separating from the substrate in either large or small sections or a flaking off of the coating.

CAUSES

INADEQUATE CLEANING

When improper cleaning occurs, the coating will not adhere to the oil, grease or contaminants present.

NO PRIMER USED

If the proper primer is not used then peeling and delamination may occur.

INADEQUATE / IMPROPER ETCH

If an inadequate or proper etch is not performed, failure can occur between the coating and substrate.

EXCESSIVE MOISTURE

Excessive moisture can cause pressure which can lift coatings off the floor.

INTERCOAT ADHESION

Improperly applied coatings or incompatible coatings can delaminate between coats.

SOLUTION TO PROBLEM

The coating must be removed by stripping, shotblasting or other suitable means. Re-apply the coating after proper surface preparation.

Remove any coating that is not adhering properly to the substrate preparation.

Remove any coating that fails to adhere to the substrate and re-prepare the area prior to applying the coating.

Remove any coating that is not tightly bonded and test substrate prior to re-coating the floor.

Remove any coating that does not adhere properly. Re-prepare the area and re-apply coating using proper techniques.

AVOIDING PROBLEM

Properly clean the substrate and provide a suitable profile for adhesion.

Use a suitable waterbase or solvent based primer prior to coating the substrate.

Repeat etch until medium textured floor is achieved and properly rinse the floor. Allow the floor to dry thoroughly before coating.

Use a moisture meter to test the floor or place and secure plastic on the floor for 24 hours to check for moisture.

Lightly roughen coat between intercoat applications and always observe procedures for recoat times.



DULL FINISH

The condition of not being glossy, i.e.; low gloss, flat appearance.

CAUSES

RECOATING TOO FAST
The application of the second coat before the proper recoat time can diminish the gloss of the subsequent coat.

POOR VENTILATION
If proper ventilation is not provided, then solvent may become trapped in the coating and affect the gloss.

SOLUTION TO PROBLEM

Lightly roughen the coating and then apply another top coat to restore the proper gloss to the surface.

Lightly roughen the coating and then apply another top coat to restore the proper gloss to the surface.

AVOIDING PROBLEM

Be certain the preceding coat has sufficiently dried. Press your thumb into the coating and if no mark is left then it is safe to recoat.

As soon as the produce becomes tack free, provide exhaust ventilation to remove solvent vapors from the area of the coating.

WHITE DISCOLORATION SPOTS

The appearance of white spots or white discoloration on or below the surface of the coating.

CAUSES

MOISTURE / HIGH HUMIDITY
The presence of moisture in the substrate or high humidity can cause coating discoloration

CONTAMINANTS / LAITANCE
Alkaline residue or alkaline salts not removed from the substrate can cause coating materials to discolor.

SOLVENT ENTRAPMENT
Trapping solvent within the coating can cause white threat like discoloration below the surface.

SOLUTION TO PROBLEM

For mild discoloration try a vinegar rinse, otherwise remove or re-apply another coat if the coating material is colored.

The only solution for this problem is the removal of the coating and the reapplication of the material after surface preparation.

Clear coats can only be restored by removal and reapplying. Color coats will need to be re-coated to restore the proper color.

AVOIDING PROBLEM

Make certain that the substrate is dry and the humidity is below the recommendations as set by the coating manufacturer.

Always check a floor after etching or surface preparation for a fine powder residue. If present, vacuum and rinse before coating.

Provide exhaust ventilation as soon as the coating is tack free to remove solvent vapors from the area of the coating.

PIGMENT OR COLOR FLOODING

The process of having light and dark streaks visually observed when applying a coating to the substrate.

CAUSES

IMPROPER MIXING
If a pigmented coating is not properly mixed, then light and dark streaks can occur when applying the coating.

SOLUTION TO PROBLEM

Roughen the surface (de-gloss) and apply the coating after proper mixing.

AVOIDING PROBLEM

Always mix any coating or two component material thoroughly to insure it is streak free and homogenous throughout.



COLOR DIFFERENCES OR SHADING

The look of uniform color with variations in shade or appearance.

CAUSES

VARIATIONS BATCH TO BATCH
Each batch of material will differ from other batches of the same material

EXPOSURE TO SUNLIGHT
Exposure to sunlight can cause some areas of a floor to discolor or fade.

PRODUCT SETTLING
If a product settles, the applicator must scrape out mechanical all of the material or color shading can occur.

SPOTTING / DISCOLORATION
Chemical attack can cause spotting in isolated areas or affect the entire floor.

SOLUTION TO PROBLEM

Roughen the surface and apply a topcoat from one continuous batch production run.

Roughen the coating and apply an aliphatic colored topcoat that is uv stable.

Roughen the surface and apply a properly mixed topcoat to the substrate.

If surface integrity is maintained, then roughen and recoat with a more chemically resistant topcoat.

AVOIDING PROBLEM

Check batch numbers prior to using and if necessary box the batches to form one continuous batch.

Plan ahead. Use materials that are suited to your particular exposure conditions.

Make certain that the product expiration date has not been exceeded and use

stirrers or shaking equipment if necessary.

Before installing a coating system, check the diversity of chemicals that will be exposed to the floor.

WRINKLING OF THE FILM

In some applications, problems may arise resulting in wrinkling of the coating that was previously applied to the floor.

CAUSES

TOO HEAVY AN APPLICATION
Some coatings when applied too thick will wrinkle after drying.

SOLVENT ATTACK
Some coatings are too active chemically to topcoat over the coating that presently exists on the floor.

SOLUTION TO PROBLEM

Either sand smooth and recoat or remove and re-apply the coating.

Mechanically or chemically remove the present coating and redo the floor.

AVOIDING PROBLEM

Follow the manufacturers recommendations as they pertain to the coverage rate.

Check the compatibility of the coating with the surface film prior to application; if necessary, use a less aggressive coating product.



EXCESSIVE COATING WEAR

Premature wearing or abrading of the coating.

CAUSES

IMPROPER MAINTENANCE

Poor maintenance can cause premature wearing of the coating.

SUBSTANDARD / SOFT CONCRETE

If the concrete is in poor condition, this may affect the performance of the needed coating applied.

SOLUTION TO PROBLEM

Apply additional coats as necessary to assure performance characteristics.

Roughen and apply additional coats as necessary or apply a more abrasion resistant coating.

AVOIDING PROBLEM

Set up proper maintenance program to assure trouble free program.

Check the softness and condition of the concrete and correct deficiencies as