

# Vinyl-Plastic Chip/Flake Floor Systems

---

## INTRODUCTION

The use of colored 'chips' or 'flakes' set in an epoxy resin are a common and popular flooring system. Often referred to as a broadcast vinyl chip floor, the chip may not actually be 'vinyl' but rather some other sort of resin, plastic or latex. The best way to picture what it looks like is to sprinkle paper confetti on your floor. The tiny confetti squares are just like the paint chips.

Besides the color(s) of the chips, the background color under the chips, and the density of their distribution on your floor, there are still other options to decide and even more than one method of application.

The best application technique is to broadcast or sprinkle the chips onto a clear epoxy or polyurethane coating which has been applied over a solid colored background or base coat. After the clear coat has hardened (allowing any solvents to evaporate completely) another clear coat may be applied to 'seal' the end result.

### Epoxy Base Coat:

The advantages of epoxy is that it is relatively inexpensive and nearly odorless, without solvents and has better adhesion properties. Even if a difference base coat is desired, an epoxy primer coat is generally applied to the bare floor so that the base coat will not peel up. The negative side of epoxies is their tendency to yellow. Color selection of epoxies can also be very limited. Colors such as clear or white, yellow a great deal. Dark red or black tend not to show the yellowing. Epoxies are good if there is not direct sunlight.

### Polyurethane Base Coat:

Two part-urethanes are more expensive than epoxies but do not yellow. They generally have strong solvent content and odor. As the solvents evaporate, the thickness of the coating thins out. They are more abrasive resistant than epoxies.

### Latex Base Coat:

Latex as a bottom or base coat has the advantage of being cheap and available in any color desired. A good quality acrylic latex paint (which will not yellow) can be used as the solid background color under a vinyl chip floor (or a multi shade 'faux' affect can be achieved using different shades' colors of latex paint instead of the vinyl chips). Let the latex dry at least 48 hours before continuing.

### Clear Top Coat:

The clear coats can be either an epoxy or a two-part polyurethane. Note that our specially formulated 2 part polyurethane clear coat (Acrylic Poly UV Plus) contain the maximum amount of UV blocker possible.

## PROCEDURE

A typical, but not the only, sequence of application would be as follows:

Prepare the surface by removing all contamination such as grease, oils, loose debris, etc. The surface should be completely dry if using any coating other than an epoxy. If needed, a coating epoxy over the existing surface can be used to seal and level the floor. Let cure for at least 48 hours.

## Vinyl-Plastic Chip/Flake Floor Systems

---

Apply the colored base coat and allow to dry. An epoxy base coat should be allowed to cure according to the product literature. Use a foam roller on the clear coat of choice and evenly sprinkle the chips on the still wet coating. Back roll with the same roller being used to apply the clear coat. This will coat both sides of the chips, flatten them down and help to evenly distribute them. It is important to use gentle pressure or the chips will just be pushed into a pile.

After the first clear coat with the chips has dried, it is time for an optional protective clear top coat. Again the options are epoxy or polyurethane. If using polyurethane, two top coats are suggested because the polyurethane dries much thinner. In the very top coat of clear polyurethane, very fine grained white sand (sugar sand) can be added or mixed into the clear coat to provide a bit of texture for anti-slip purposes. The chips will make the floor slightly uneven but nevertheless, the finished surface could still be slippery when wet. If sugar sand is added use about 1 to 1.25 pints of sand per gallon and mix each time before rolling on more of the coating or else the sand will sink to the bottom of the polyurethane. An epoxy top coat is thicker and the sand will sink to the bottom of the coating, leaving nothing sticking up for the non-slip texture.

### EASIER SYSTEMS

The base coat, clear coat with chips, and clear top coat system described above works well with 'commercial systems' and systems where the chips completely cover the base coat. For a nice system with a fair amount of background showing through you can just sprinkle the chips directly into the wet epoxy (or wet base coat) without any of the other clear coats. The big problem with this approach is getting the chips evenly distributed. It is SO easy to drop a 'pile' of the chips into one area and there is no way to easily fix the blotchy look. The best answer is to probably practice sprinkling the chips onto cardboard before you actually apply them to the wet epoxy. Optionally apply a clear top coat to seal in and protect the chip effect.

### CHIP INFORMATION

The chips are available in a minimum of 10 pound bags or 55 pound boxes. They may be ordered in a solid color or preblended.

Coverage for a 10 pound bag:

- 100% coverage (no background shows through) - 100 square feet.
- 50% coverage - 200 square feet.
- 25% coverage - 400 square feet.
- 7% coverage - 1,000 square feet.

To test on your own: 1 pound of the chips equals 36 volume ounces (a quart is 32 ounces). So a 9 ounce cup of 'home-made chip' (cut up pieces of paper) would be the same as a quarter pound (0.25 pounds) of the actual chips. The 9 volume ounces of cut paper scattered on a 7 X 7 square foot area (49 square feet) would basically show the approx. 25% coverage mentioned above. An important thing to notice is just how hard it is to get the chips spread evenly. That's why the chips are usually applied to a clear middle coat of epoxy instead of the pigmented bottom coat. Of course, some people like the uneven look.

Review the chip color chart to choose the color(s) desired. If more than one color is chosen, a decision must be made as to the percentage of each color to be blended. Note that dark colors carry more visual weight than light colors.