Terms & Phrases for our Polyurea Lite Installation Instructions

(These are not meant to be scientific or even a professional definition. They are intended to provide clarity and are in reference to our instructions for Polyurea specifically)

Polyurea: This is the main coating. It is typically shipped in gallons or quarts. It is clear in color.

Tint: Often labeled Pigment. This is a one quart can of 'color' that when added to one gallon of Polyurea and mixed with a drill mixer, yields the product for the 'color coat'.

Color Coat/Base Coat: This is the initial base coat of polyurea. It consists of the Polyurea mixed with the tint.

Clear Coat: A coat of polyurea done with no tint. Typically performed over a color coat. Some customers will simply do two clear coats for an industrial look.

Epoxy Base Coat: A coat of clear water-based epoxy applied before the color coat in order to give a solid color for Black, White, and Blue base colors and/or to increase the total thickness of the coating (Only available with kits that have epoxy base addition selected).

Flake: 'Paint Chips' that are added to epoxy and polyurea systems to add texture and color. The general application method is to broadcast the Flake onto the wet "tinted" color coat.

System: We define a system as a combination of the necessary color coat(s), clear coat(s) and flake. Specific examples below.

Polyurea Lite System: A Polyurea kit that includes enough material for a single coat of color and a single coat of clear. In this system the flake are broadcast into the first and only color coat.

Polyurea Lite + Epoxy Base System: A Polyurea kit that includes enough material for two color coats and a single coat of clear. In this system the flakes are broadcast into the second color coat. The exception would be if the customer chooses to install one color coat and two clear coats.

Broadcast: The method of applying flake. They are applied by hand, tossing in an upward motion. That process is referred to as broadcasting the flake.

Random Broadcast: A coating system where both the polyurea and the flake are visible. Our kits include 1 pound of flake Per 100 Sq. Ft. You may use less as desired, but we do not suggest using more.

Coverage: Typically expressed in a range, this is literally how far to spread a gallon of material. Coverage is never determined by sight or feel. If the coverage rate or spread rate is 300 Sq. Ft. per gallon, you will spread one gallon of Polyurea over 300 Square feet EVEN if it looks or feels too thick or too thin.

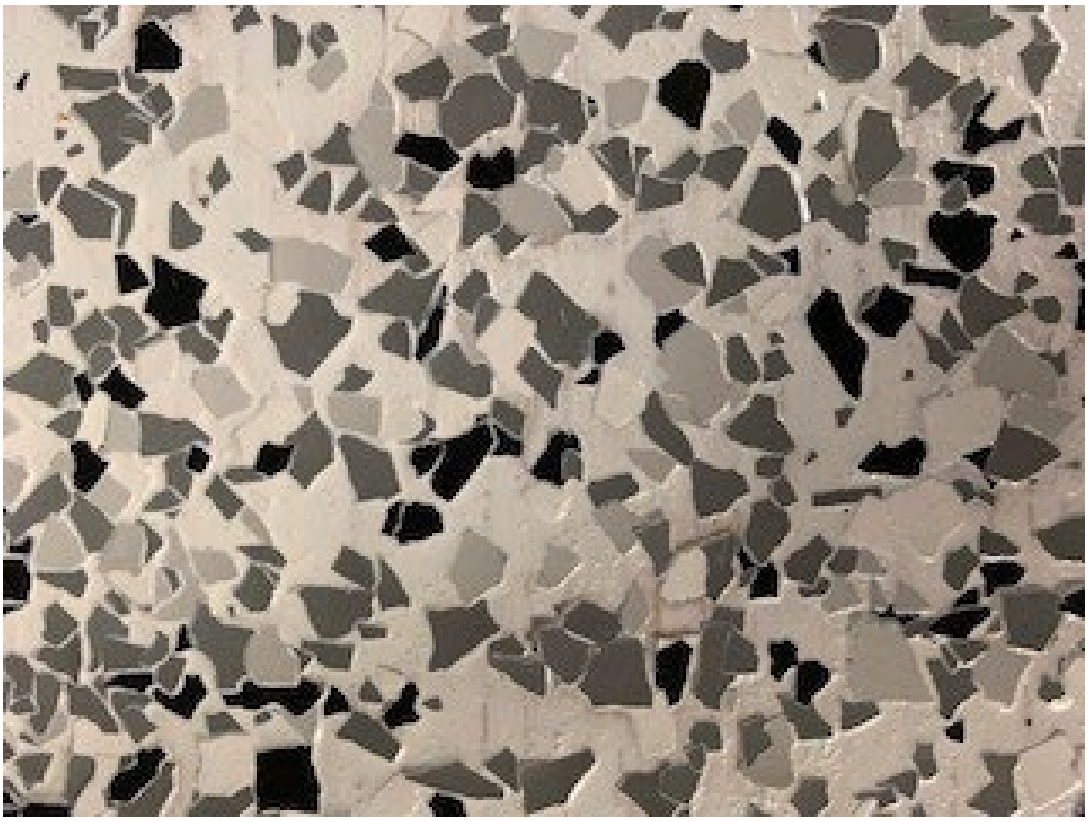
Square Foot: A 12" x 12" area. Multiple 12" x 12" areas are expressed as Square Feet. A 20x20 area would be 400 Square Feet.

Anti-Skid or Anti-Wear: A material added to the final clear coat to increase slip resistance and wear resistance. For this system it is a fine white powdery substance packaged in a translucent container with a white lid.

Moisture: Moisture, in the context of concrete, does not necessarily mean visible water. Moisture content cannot be determined visually. An appropriate testing method must be used.

Surface Profile / Concrete Surface Profile: Expressed as 'CSP'. The higher the number the 'rougher' the surface. CSP2 would be rougher than CSP1. There are many images available online

Pigment



Random Broadcast

All Weather Floors Polyurea Lite Coating Instructions

IMPORTANT NOTES:

We recommend reading through these instructions IN FULL before beginning your coating project. It is important to know the steps that come later for planning around temperatures and cure times for each coat.

UNPACKAGING

Unpackaging your product before application is necessary to ensure your install goes well. In many cases, your order will ship from multiple locations and in a small percentage of projects, an essential item may go missing or be damaged in transit. Checking everything ahead of time is important. We do not overnight coating products. Make sure you keep extra supplies handy. Those include but are not limited to extra pails, gloves, roller covers, solvents for cleaning and a NIOSH-approved respirator is a must.

When we work with our customers on the phone, we always have them separate the products *based on what will be used in each coat:*

Polyurea and tint for the color coat, along with flake in one pile.

Polyurea for clear coat and anti-skid in another.

(For Epoxy Base Kits): Epoxy base parts A (1 QT) and B (1 GAL)

Breaking the product out by coat also helps to make sure you understand how much of each product you are using in each coat.

READ BEFORE INSTALLATION

Polyurea kits use the same material for the base coat as the top coat/clear coat. The only difference is you add tint for the base coat.

You may receive more tint and anti-wear/anti-skid than you need. DO NOT just use all of it. Tint always comes prepackaged for a 1-gallon container. For all colors except white, if you have a quart that needs to be tinted use 5 fluid ounces of tint; 10 fl oz for a half gallon etc. For white use 7.5 Fluid Ounces per Quart –adjust all other sizes accordingly. Always mix tinted material before applying to the floor. It is suggested that tinted material be combined into a single pail or bucket for color consistency. A drill mixer is suggested but product should be mixed at a low speed to avoid heating the coating or introducing air bubbles into it.

Add on Kits: In an effort to reduce costs, you may need to split a gallon. For example, if you need 1/2 gallon of clear and 1/2 gallon of color, we are sending a gallon. You would separate it and tint only half of it (1/2 gallon).

The anti-wear amount is given as a range on the instructions. It is important that you consider the safety of those using the garage, the environmental conditions, and ease of cleaning, before deciding how much to use.

We suggest using Midwest Rake 9” 48203 3/8” roller or 18” 48209 3/8” Roller. Change rollers every coat and every 400-500 square feet. These are available on our Polyurea page

Follow all safety precautions listed on the can. Work in a well-ventilated area during each step. Wear a NIOSH approved respirator, pants, long sleeves and gloves. Turn off any pilot lights and make sure no open flames are present during application. Make sure you have ventilation and maintain ventilation during the curing process. We are not saying you should leave your garage door wide open for three days, but some fresh air is necessary.

GENERAL

As with all coating guidelines, these steps are not meant to substitute for common sense and actual field experience. It is not possible to discuss every situation. Please contact Garage Flooring LLC if you have additional questions. *Instructions provided online may be updated more frequently than the print version. Always verify this information with the current installation instructions on our website.*

PRODUCT ESTIMATION

Optional Epoxy Base Coat: Unlike the other 2 coats, the epoxy base coat is not the same material as the Polyurea coating. Each gallon of the Epoxy Base Coat will cover 300-350 sq ft per gallon. A “gallon” of the epoxy base coat refers to 1 quart of Part A and 1 gallon of Part B. These 2 parts will be mixed together before applying the epoxy base coat. Once part A and B are mixed, you will have 45-50 minutes to apply it before it begins to harden in the bucket. We recommend working and mixing in smaller sections at a time to avoid running out of working time with this coat.

Polyurea Base/Color Coat: We suggest you estimate coverage based on 300 square feet per gallon. Polyurea Lite kits are designed for a thinner system. We use 300 sq. ft. per gallon spreading rate on all kits. We do not recommend exceeding 300 sq. ft. per gallon with the Polyurea at any point as it can cause issues with durability. This product is three dimensional. The further you spread it, the thinner your floor coating will be. If your area is smaller than the coverage on your kit, the Polyurea can be spread as thick as 200 sq ft per gallon if needed.

We cannot emphasize this point enough; Once you have determined how much material you will need per coat, use all of that material. You are *not painting* the floor. You are building a three-dimensional system. Failure to use all your material may result in system failure.

This product requires **a minimum** of two coats total. One color coat and one clear coat. All installations must have at least one coat of clear, even if you are not using flake. **Black, White, and Blue colors need the epoxy base coat to ensure that the color cures solid.**

Clear Coat: The clear coat will be made up of untinted Polyurea coating with anti-skid additive mixed in. The clear coat should be spread at the same 300 sq ft per gallon as the Polyurea Base/Color Coat.

Flake: Random broadcast flake projects require between ¼ to 1 pound of flake per 100 square feet. Our kits include enough flake for a rate of 1 lb. per 100 sq ft. Using all of the flake in your kit is not required.

Anti-skid/Anti-wear: We suggest ½ to 1 pound of our anti-wear anti-skid per gallon in the final coat. If you do not have a scale, you can use a cup measure as 1 cup = 1 lb. with the anti-skid additive in this kit.

STORAGE

Shelf life defines the total amount of time a product can sit on the shelf. Shelf life includes time spent in transit, time at the plant and time at distribution. We highly suggest using the product within 60 days of receipt. Store in temperature controlled environment in a well-sealed container. Do not allow to freeze.

MOISTURE TESTING

A moisture test is an important step with a coating. A plastic sheet test can be effective; however for warranty purposes, a calcium chloride test with results under 3 is suggested.

CLEANING THE SURFACE

It is important that your concrete is free from oils, dirt, dust and other contaminants. We suggest All Weather Floors Industrial Cleaner. More stubborn oil stains may need to be removed using oil specific products like Pour N' Restore which can be found at stores locally in most areas.

PREP YOUR SURFACE (Required)

The objective of surface preparation is to provide a surface that the coating can bond to mechanically, meaning that the coating must soak into the concrete slightly to create a strong bond. A hard, smooth surface generally will not provide good adhesion. Slightly porous, rough surfaces provide better adhesion.

Acid Etch, Acid Stain (for clear), diamond grinding or shot blasting shall provide sufficient profile for proper adhesion. The desired surface profile is between CSP1 and CSP2. If acid etching, make sure you neutralize the acid and allow the floor to dry. If mechanical means are necessary, clean all dust. We highly recommend Ghostshield Eco-Etch for acid etching as it does not require neutralizing after etching.

Perform any repairs. Polyurea is not designed to repair concrete, fill cracks or fill joints. You can coat the surface of joints but not fill them.

We have found the following articles useful for preparing a garage floor

How to Acid Etch A Garage Floor: https://allgaragefloors.com/acid-etch-garage-floor/

How to Grind a Garage Floor: https://allgaragefloors.com/how-to-grind-garage-floor/

After etching or grinding it is important to make sure the floor is clean and free of oil stains, dust and other contaminants. You can test to make sure your floor is prepped properly with a spray bottle of water. Spray the floor with a spray of water in several areas and make sure that the water begins soaking into the surface right away. If the water is beading up on top or taking a long time to soak in, the floor may not be prepped enough for the coating to soak into it and bond properly. We highly recommend performing this test over "problem areas" like spots where oil stains were removed. This test will not work over concrete repair/patch materials and that is normal.

OPTIONAL EPOXY BASE COAT APPLICATION

Skip to the Polyurea Base/Color Coat Application if you do not have a kit that includes the epoxy base coat.

Mix the desired amount of part A and B for the Epoxy Base Coat for the first section you are working in. Remember to keep to the ratio of 1 qt of A to 1 gal of B to ensure that the coat cures properly. This can be broken down to ½ qt Part A and ½ Gal Part B and so on. Once the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free, 3 minutes minimum. This product must be mixed well before using. **After mixing, you have 45-50 minutes of working time with the material before it begins to harden. If the material becomes thick while applying and sticking to the roller, the pot-life has been exceeded, do not continue.**

The mixed material can be applied by brush or roller, 3/8” nap. Always roll in (2) directions for best finish and full coverage. Maintain temperatures within the recommended ranges during the application and curing process. This product is designed for 1 coat when used before Polyurea. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Apply material as evenly in thickness as possible. The first coat must be tack free and cured before recoating with Polyurea Base/Color Coat.

Wait a minimum of 4-5 hours for the epoxy base coat to become tack-free. Once the coat is tack-free, you can begin coating over it with your Polyurea Base/Color Coat.

DO NOT EXCEED 24 HOURS BETWEEN APPLYING THE EPOXY BASE AND POLYUREA BASE COATS.

POLYUREA BASE/COLOR COAT APPLICATION

To accomplish a consistent color coat, it is important to prepare all the tinted amount needed for your project (for all coats) at one time, preferably in a single container. Typically this is accomplished by using a 5-gallon pail to combine the appropriate amount of polyurea for your color coat and the appropriate amount of tint. The mixing ratio is 1 quart-sized tint/pigment pack per 1 gallon of clear Polyurea. Mix product using a drill mixer set to low speed. Do not incorporate air into the mixture.

DO NOT APPLY PRODUCT TOO THICK OR YOU WILL HAVE SOLVENT BUBBLING THAT WILL SHOW THROUGH YOUR FINAL COAT.

Using a spread rate of 300 sq ft per gallon, pour the appropriate amount of material on the floor in ribbons. Disperse it evenly based on the coverage rate. Spread it with an included 3/8” nap roller — then lightly back-roll.

Allow at least 2-3 hours between color coat and clear coat. Coating should be tack-free before beginning the next coat. Again, please note, flake instructions should only be followed in your last coat of color. **NEVER exceed 20 hours between Polyurea coats**. The next coat should be finished within 20 hours of starting the previous coat. If 20 hours is exceeded, you will need to sand, vacuum, solvent wipe and drywipe your floor.

Repeat steps as necessary. Some systems will have multiple coats of clear or color.

CLEAR COAT

Before installing the clear coat, it is important to lightly scrape and remove any loose or angular flake. In a DIY application, this can be accomplished using the floor attachment of a shop vac. It is often best to cover the edges of the floor attachment with duct tape. A scraper can also be used with caution. You are not trying to tear the flake out of the coating. Just get what is already loose.

Mix clear using a drill mixer. *If this is your final coat of clear, mix in the anti-skid. Anti-skid additive is heavier than the coating and will settle to the bottom if not mixed regularly. Restir the clear material every time you get more out of the bucket to ensure that the anti-skid is not all at the bottom.* This coat will be installed using two rollers. The first roller will be used to spread the clear coating from the paint tray. Using a paint tray, wet your roller. Because the clear is harder to see, we suggest indirect lighting and working in sections. Once you apply the clear to a section, roll over the section with the other (dry) roller in the opposite direction to smooth out roller marks. Do not apply any pressure to the dry roller. We suggest changing roller covers every 400 sq. ft.

DO NOT APPLY PRODUCT TOO THICK OR YOU WILL HAVE SOLVENT BUBBLING THAT WILL SHOW THROUGH YOUR FINAL COAT. **You must 'Dip and Roll' all coats of clear using a paint tray.**

Please remember to add your anti-skid / anti-wear into your (final) clear coat. Make sure you add the anti-skid slowly to the bucket and mix continuously to avoid clumps or unequal distribution. It is important not to incorporate any air into the coating and to let any bubbles settle out.

We suggest waiting three full days at 70 degrees before driving on your floor — light foot traffic after 24 hours.

THE PRODUCT MUST CURE FOR 72 HOURS. IF YOU LIVE IN AN AREA WHERE IT IS COLD AT NIGHT, DO NOT COUNT NIGHTTIME HOURS TOWARDS THE 72 HOURS. Time between coats is also impacted by cold temperatures.

Polyurea Lite Kit Suggested Gallons Per Coat*				
	300 sq ft	600 sq ft	900 sq ft	1200 sq ft
Coat 1 – Tinted Polyurea	1	2	3	4
Coat 2 – Clear Polyurea	1	2	3	4

Polyurea Lite Kit + Epoxy Base Suggested Gallons Per Coat*				
	300 sq ft	600 sq ft	900 sq ft	1200 sq ft
Epoxy Base	1 kit	2 kits	3 kits	4 kits
Coat 2 – Tinted Polyurea	1	2	3	4
Coat 3 – Clear Polyurea	1	2	3	4

* Suggestion is based on actual square footage and kit size being the same. If they do not match simply take your square footage and divide by 300 for gallons per coat. See instructions for tint breakdown.