ROLL ON ROCK™ INSTALLATION GUIDE

SYSTEM 4H

PRODUCT DESCRIPTION

The ROLL ON ROCK™ system 4h is a hybrid broadcast flake system designed to be installed to concrete flooring surfaces in as little as 3 hours. System 4h will provide the substrate protection from abrasion, wear, and chemical attack while providing a beautiful granite appearance. System 4h uses a Hybrid Primer that wicks into the concrete. The Hybrid Body coat is applied directly over the primer 30 minutes later and then the chips are broadcast while it is wet. The final Polyurea topcoat is applied 60-90 minutes later and the floor can be walked on in as little as 2 hours. System 4h creates an incredible bond that is able to withstand more than 5 lbs of MVE. System 4 can be done in 1trip to the jobsite and driven on the next day. In fact the garage can be cleared in the morning and that evening all the items can be returned to the garage. System 4h is designed to be installed by professional applicators only.

PRODUCT COMPOSITION

The ROLL ON ROCK™ System 4 is a multi-layered application made up of the following components:

1) 5205HYBRID PRIMER– a clear deep penetrating fast drying primer designed to be applied to concrete substrates.
2) 5210 HYBRID BODY COAT – a pigmented fast drying body coat that can be flaked up to 20 minutes later.
3) BROADCAST FLAKES – decorative flakes available in a variety of color blends.
4) TOPCOAT: (use flammable safety precautions when working with this product)
   5073 POLYUREA – a high solids clear Polyurea topcoat that exhibits great chemical and excellent wear resistance while providing a deep high gloss surface that can be walked on in as little as 2 hours.

COVERAGE RATES AND PACKAGING

5205 HYBRID PRIMER	450 ft/Kit 300 ft/Gal	Sold as 1.5 -Gallon Kit
5210 HYBRID BODYCOAT	250 ft/Kit 250 ft/Gal	Sold as 1. -Gallon Kit
FLAKES	~8-10 ft/lb	Sold in 50lb boxes
5073 POLYUREA	450-500 ft/Kit 225-250 ft/Gal	Sold in 2.0- Gallon Kit

SUBSTRATE REQUIRMENTS

Concrete

Concrete shall be structurally sound and stable. Concrete shall be free of dust, dirt, grease, contamination, surface laitance, and other potential bond-breaking substances that could impair adhesion. All cracks, gouges, and other surface defects need to be addressed prior to coating installation. Substrate and ambient temperatures must be above 50°F (10°C) during installation of coating. Relative humidity should not exceed 80% during installation of the coating. Environmental conditions must not be near the dew point during installation of the coating. Moisture Vapor Transmission of the substrate must not exceed 5lb per 1000 ft^2 per 24 hours. For high MVT substrates, consult with a Versatile Building Products representative for recommendations.

Other Substrates

Versatile Building Products only recommends its 2 component products for use over concrete. All other substrates are done at the users own risk.

STEP 1) SURFACE PREPARATION

(There are many methods of surface preparation for various substrates, many of which are adequate for this application. Consult a Versatile Building Products Representative for alternatives to the procedure outlined below, and methods of correcting problematic and contaminated substrates.)

Concrete
Do not acid etch period. Aggressive concrete preparation is not needed with this system. This is because the 5205 wicks into the concrete. Start with a clean porous concrete surface and grind the concrete using a 7-inch or larger grinder with a diamond grinding wheel to achieve a concrete texture equal to Concrete Surface Profile (CSP) #2 (should feel like 150 grit sandpaper), according to International Concrete Repair Institute (ICRI) Guideline No. 03732. As a general rule an average 2 car garage takes about 30 minutes for 1 man to do. Remove all dust and dirt when completed.

STEP 2) INSTALLATION OF 5205 PRIMER
Note: Material has a pot-life of 120 minutes based on an insulated 200 gram mass at a starting temperature of 77°F. Unlike epoxy, the 5205 will have a longer potlife if the material is left in the pail so pour out what will be needed only as needed. ***Expect a 45 minute potlife when working with a 2 gal mas at normal temperature. Warning: Large masses of mixed and/or heated material will have a shorter pot-life***.

Preparation
- Shut off all sources of ignition prior to work and ground all equipment throughout the sealing process.
- Supply auxiliary ventilation as necessary to produce a safe working environment.
- This material causes light headedness, use a NIOSH approved carbon filter respirator capable of filtering organic vapors.

Mixing
Use 3 bucket mixing: Using a jiffy-type mixing blade at a minimum of 700 rpm, mix according to ratio listed on label of the 5205 A-Component with 5205 B-Component for two minutes. Mix for two minutes and transfer mix to a second mixing vessel and mix for an additional minute (transferring to a second mixing vessel prevents unmixed components clinging to the sides of the first mixing container from being poured onto the floor.)

Application
Begin by cutting-in the concrete footings and edges with a brush. Pour a band of the mixed 5205 material out onto the floor and begin rolling with a 1/4-3/8" nap roller. Work the material evenly to a wet film thickness of 4-5 mils (250-300 ft/gallon). Try and work within the control or expansion joints usually found on concrete floors. Allow the 5205 to dry to a slightly tacky state before proceeding to the next step. If the floor goes beyond tacky and is hard then it will need to be sanded to scuff it up so the 5210 will stick to it. Remember this system is designed for speed so don't take a long break after applying the 5205. You can also use a fingernail test; if it is fairly difficult to leave a fingernail imprint then you must sand or screen the surface before applying the 5210.

STEP 3) INSTALLATION OF 5210 BODYCOAT
Note: Material has a pot-life of 60 minutes based on an insulated 200 gram mass at a starting temperature of 77°F. Unlike epoxy, the 5210 will have a longer potlife if the material is left in the pail so pour out what will be needed only as needed. ***Expect a 35 minute potlife when working with a 2 gal mas at normal temperature. Warning: Large masses of mixed and/or heated material will have a shorter pot-life***.

Mixing
Use 3 bucket mixing: Using a jiffy-type mixing blade at a minimum of 700 rpm, mix according to ratio listed on label of the 5210 A-Component with 5210 B-Component for two minutes. Mix for two minutes and transfer mix to a second mixing vessel and mix for an additional minute (transferring to a second mixing vessel prevents unmixed components clinging to the sides of the first mixing container from being poured onto the floor.)

Application
Begin by cutting-in the concrete footings and edges with a brush. Pour a band of the mixed 5210 material out onto the floor and begin rolling with a 1/4-3/8" nap roller. Work the material evenly to a wet film thickness of 4-5 mils (250 ft/gallon). Try and work within the control or expansion joints usually found on concrete floors. The time to dry before scraping will be longer if the 5210 is applied at less than 250 sq ft per gallon. Reports of 2 hours to scrape at 200 sq ft per gal have been received so be sure to apply the material evenly and at the proper spread rate.

FLAKES should be broadcast into the wet 5210 while the coating still has a high degree of tackiness and within 20 minutes of the initial application to area. Scoop the flakes up with your hand and spread onto the surface by throwing the flakes, releasing them from your hand (like feeding chickens or throwing grass seed). Throwing to rejection typically means that you will not be able to see the color beneath it. Allow the 5210 BODYCOAT to dry a to a tack free state (usually 60-90 minutes) before proceeding to the next step.

Flaking Tips
Do the curb walls first and then vacuum up the remaining chips from the floor before doing the field. This is an trick that when done properly will save time and back breaking energy. Also flaking to appearance will require less chip and topcoat but this is a learned skill and should not be done by an inexperienced applicator. Using large flake also reduces the amount of topcoat need since there is less surface are due to the flatness of the chip and less layering of the chip.

Flake Recovery
Once the 5210 has dried sufficiently, sweep, blow, and/or vacuum excess FLAKES from the surface. Scrape protruding flakes and remove all loose flake debris from the surface. Recovered FLAKES may be used on a subsequent job, but should be sifted to remove small broken flake dust. Chipped surface can be lightly sanded if a smoother finished surface is desired.

STEP 4) INSTALLATION OF 5073 POLYUREA TOPCOAT
Note: Keep material cool for 24 hours before the installation, the ideal temperature is 70° F. Cure time is effected by environmental conditions. Do not force dry. High humidity and/or low temperatures can cause haziness and blushing in the coating. Material has a pot-life of 60 minutes based on an insulated 200 gram mass at a starting temperature of 73°F***. Expect a 40 minute potlife when working with a 2 gal mas at normal temperatures. Warning: Large masses of mixed and/or heated material will have a shorter pot-life***.

Preparation
- Shut off all sources of ignition prior to work and ground all equipment throughout the sealing process.
- Supply auxiliary ventilation as necessary to produce a safe working environment.
- This material causes light headedness, use a NIOSH approved carbon filter respirator capable of filtering organic vapors.

Hot Weather Tips
5073 has a shorter pot life in very hot conditions. Keep core temperature to 80 degrees whenever possible; if it is above 80° F bring core temperature down by icing (do this hours before doing job so the core temperature is lowered) or placing in a cool environment the day before application. If instructions are not followed excessive heat may cause a shorter pot life.

Cold Weather Tips
Accelerator 50 may be used to speed the cure of 5073 at lower temperatures. Also, allowing extra induction time of mixed material in the container will also help speed the cure, however this should only be done by experienced applicators.

Mixing
DO NOT THIN 5073! For ideal potlife material should be at a temperature of (70-75° F) or below. Mix the 5073 A-Component with 5073 B-Component at ratios listed on container for 2-3 minutes using a jiffy-type mixing blade at no less than 400rpm. Transfer mixed material to a second mixing vessel and mix an additional 30 seconds to ensure that material along the sides of the first mixing vessel have been properly incorporated into the mixture. ***Caution, Do Not Mix More than 2 Gallons at a Time. The more you mix the shorter your pot life will be.***

Application
Pour the 5073 from container as needed while leaving the remaining material in the container until needed. Unlike epoxy, 5073 will have a longer potlife when left in the container as opposed to being spread out onto the floor. Apply 5073 mixture to the substrate using a brush, roller, or squeegee at a desired coverage rate. Be sure to cross roll areas to be sure the material is spread evenly. Do not apply at rates less than 175 sq. ft. per gallon or out gassing bubbles may occur. Use spiked shoes when walking into wet material. Because the Polyurea has such a high gloss be sure to remove dust from areas during application. When going over solid color surfaces be sure to back-roll immediately and keep back-rolling to a minimum which will help control micro bubbles.

Added Tips From Our FAQ Page on the Website (check the web for more recent updates)

Extra Build Tip: (for the 2 coat topcoat installers)

5205is great as a first topcoat over the flake when you want to create extra build, the reason is that you can apply it thinner so it seals the flake (Prevents the 5073 from diving into the flake) and it is dry in 20-30 minutes so you can put a coat of 5073 on top and all of it will remain on top since the flake is already sealed. This saves money for the Two Coat installer because the 5205 is less expensive, covers more and dries extremely fast.

How to Get the Most Potlife:

First, do your best to keep materials cool. Heat is the worst enemy of long potlife so don't leave it out in the sun on the driveway or in the truck bed. Unlike epoxy, all products used in the system 4 will have a longer potlife if left in the pails after being mixed. So on a typical 2 car garage you will find that it is broken up into 4 sections because of expansion joints or saw cut control joints. Start by pouring material out of the container in a fluid line on one section. Then begin to spread the material out so it covers that section. When section is covered be sure to backroll it at a right angle of first coat so the material is a uniform thickness (especially important when using the extremely glossy 5073 topcoat). Then proceed to do this process all over again on the next section, always working from material in the pail.

Touch Up a Holiday Where The Flake Did Not Hold:

This will not be an issue with experienced installers but if you do get a holiday where the flake does not cover then go ahead and use the 5205 and apply it very tight to the surface that needs more flake. Then sprinkle a very small amount of flake onto it just so it blends in to the rest of the area. DO NOT OVER FLAKE! This is the biggest mistake people make and it will be noticeable. Look at the touched up area from other angles to be sure it blends in. Allow it to dry 20 minutes then do a light re-scrape. Now your floor is ready to be sealed.

5073 Topcoat Tips:

Work the material as listed above in the how to get most potlife section. The biggest thing to stress is uniform thickness. By using an 18 inch roller you are spreading the material more evenly since there are 2 pressure points be applied to the roller (the left & right side). Also be sure to cross roll all sections before proceeding to the next section. Watch for low spots or puddles as these will become shiners (round glassy areas that are noticeable). If applying another coat after 24 hours then be sure to lightly sand the surface to de-gloss it.

Cure Times

Allow Topcoat 2-3 hours to dry before recoating, if necessary. Recoating after 12 hours may require de-glossing of the surface by use of a floor buffer. Area may be opened to light foot traffic in 2-3 hours depending on environmental conditions. Area may be opened to light vehicular traffic in 12-24 hours depending on environmental conditions. Chemical resistance will not fully develop for 5-7 days. Protect floor from spills during cure.

Pilot lights and surrounding sources of ignition may be put back into service once solvent vapors have dissipated to a level below the lower explosion limit. Typically, this will take 3-6 hours after floor installation with adequate ventilation.

Clean Up

Immediately cleanup splatter marks and tools with Acetone. Clean hands and exposed skin with mild soap and water, and/or citrus based hand-cleaner.

ADDITIONAL CAUTIONS AND RECOMENDATIONS

- Do not force dry any components of the Roll On Rock™ system.
- Coverage rates may vary.
- Mask all areas that need protection.
- Always wear protective clothing and equipment as required by OSHA and as needed for good safety practices.
- Read Material Safety Data Sheets before commencing work.
- Use spiked shoes when walking into wet material while broadcasting the flakes.
- Use an 18-inch roller to help speed the application and uniformity of material.
- Be sure to cross-roll and back-roll the topcoats to ensure a uniform coat.
- Do not allow material to puddle.
- Use accelerators when installing in cold climates or the return to service time needs to be fast tracked.
- Turn off all sources of ignition if working with 5073 topcoat and follow safety guidelines listed in product sections.