

CRYL-A-STAIN

GENERAL

CRYL-A-STAIN is a 100% reactive, fast curing methyl methacrylate (MMA) based acrylic resin system. The typical system consists of 2-3 coats and results in a thickness of 30-45 mils. The CRYL-A-STAIN system is composed of CRYL-A-PRIME P-101 and CRYL-A-TOP T-301 resin. CRYL-A-STAIN ADDITIVE is added on site to give a conventional concrete stain or dyed look with all the benefits of an MMA based system. Surface finish can be smooth or slip resistant. The typical system is composed of a tinted primer to which a clear or tinted topcoat of the same or different color can be added on all or part of the surface. **THE BONDING ENHANCER CRYL-A-BOND IS REQUIRED IN CRYL-A-PRIME P-101 FOR USE WITH THIS SYSTEM. For specific details and mixing instructions refer to see [CRYL-A-BOND](#). Be sure to watch the product application video at www.dur-a-flex.com**

MOISTURE CONCERNS

Moisture vapor transmission in the slab must be measured prior to application to ensure a long lasting installation. Refer to the “**Moisture Assessment Guide**” for more information. This system can be installed with a maximum reading of 5 lb/1000 SF/24 hrs.

LIMITATIONS

A test sample of the complete system should be installed and approved prior to any large scale application of the material. Sample size recommended is 3' x 3' = 9 square feet minimum. Lighter concrete will produce more fluorescent colors and darker concrete will produce more earthy tones. The color may have to be adjusted to get the desired results. Be sure to provide a large enough sample to achieve an accurate representation of the actual finished floor. Be sure to use CRYL-A-BOND ADDITIVE in the CRYL-PRIME P-101 to match the color of the actual finished floor. Use a ½” nap roller to apply.

RE-COAT TIME

THE MAXIMUM RE-COAT TIME FOR CRYL-A-BOND ADDITIVE IS 16 HOURS. If the next coat is not applied within 16 hours the primer must be

mechanically sanded and wiped with CRYL-A-CLEAN solvent. Failure to observe this could result in inadequate inter-coat adhesion.

SURFACE PREPARATION

The substrate must be dry and free of oil, grease, dirt, bituminous and other contaminants. Preparation is a two step process:

1. Shot blast the floor and remove all laitance to open the pores of the concrete. Do not leave blast lines because the system is transparent and the lines will reflect through the finished product. Results will vary with shot size.
2. Diamond grind the floor to remove any trace blast lines and expose the desired amount of aggregate. This can be accomplished by a single grinding with a coarse diamond. Polishing the surface is not recommended because it will close the pores of the substrate and produce a poor bond. Thoroughly vacuum the substrate. At this point Bond Tests are conducted to assure that there is adequate preparation.

BOND TEST

Prior to full application of the primer, bond tests shall be conducted to determine adequacy of substrate preparation and bond. The bond of the primer to the substrate should be greater than the tensile strength of the substrate. A proper Bond Test will result in concrete and fractured aggregate being attached to the specimen. If only laitance or a small amount of the substrate is attached further preparation is required.

The procedure is as follows:

Pour 6 ounces of primer in a plastic cup. Add ¾ of an ounce of CRYL-A-BOND additive. Add ¼ ounce of CRYL-A-CURE (@ 70F) and stir for 15 to 30 seconds. Add enough Q-11 (1 1/2 times the volume of resin) to achieve a very WET slurry. Note: If this mix is too dry it will not leave enough primer to soak into the substrate. Excessive liquid on the surface when you stop mixing is a good indication that the mix is appropriately “wet”.

Place patties of this mixture on the substrate.

Stir the mixture in-between placing each patty or the first patties will be very wet and the last patty will be too dry.

Allow to cure about 1 hour. The patty is fully cured when it has cooled to substrate temperature. Remove with a hammer and chisel. Look at the bottom of the patty. You should have removed 1/8" to 1/2" inch of concrete. If there is nothing or only laitance, this is an indication that further preparation is necessary.

VENTILATION

Install the ventilation system and test that there is adequate air flow to remove the vapor during the installation and there are no "dead" areas, pay particular attention to corners. Check where the vapor is exhausting and that it does not cause an issue with any adjacent facilities. Air flow is typically checked with the use of streamers or the use of a smoke machine. For detailed instructions, Ventilation Guidelines can be found on our website @ [Ventilation Guidelines](#).

APPLICATION METHOD

MIXING

CRYL-A-PRIME P-101 must be applied with CRYL-A-BOND ADDITIVE. Add 16 ounces of CRYL-A-BOND per gallon of CRYL-A-PRIME P-101. CRYL-A-BOND is not used in CRYL-A-TOP T-301.

CRYL-A-STAIN ADDITIVE is added up to a maximum of one ounce per gallon of CRYL-A-PRIME P-101.

The amount of CRYL-A-CURE (BPO) to be used depends upon substrate temperature (40-90°F) and choice of resin. (Refer to the **CRYL-A-FLEX Mixing Chart** to determine appropriate amounts.) CRYL-A-CURE is added to the resin and thoroughly dispersed. Due to the material's short pot life, only make enough material to apply in five minute intervals.

Measure out 1 gallon of CRYL-A-PRIME P-101 and pour into a separate mixing pail. Add 16 ounces of CRYL-A-BOND followed by up to one ounce of CRYL-A-STAIN additive. MIX for 15 seconds with a high speed drill with a 3/2 inch Jiffler blade. Add the appropriate amount of CRYL-A-CURE and mix for an additional 30 seconds or until the CRYL-A-CURE is completely dissolved.

PRIMER

Apply by brush and roller at 90-110 SF per gallon, depending on the porosity of the substrate. Pour the entire batch in a 4-6 inch ribbon. Apply the primer in a sweeping side to side motion using an 18 inch, 1/2 inch nap, non-shed roller. Substrates that are very porous may require an additional primer application. **NOTE:** **Roller covers with flat sides will produce line stripes and dark marks. Be sure roller covers are round and do not bounce when rolled. Prior to the installation, roller covers can be tested by rolling on the floor. To minimize the bounciness try these two tips: roll with firm pressure to help re-shape the nap and core; wrap with "blue painter's tape" and remove the tape to help fluff out the roller nap.**

When applying primer, avoid leaving puddles. Be sure to finish roll (back-roll) immediately after initial placement of the product. The product should be finish rolled perpendicular to the initial application. Best results are achieved if the product is finish rolled within 1-2 minutes of initial placement. When finish rolling with very light pressure on the roller, 1/2 inch nap roller covers may become over saturated, this may cause puddles. Squeeze out some of the excess material as needed but always avoid dry rolling as this will not leave enough material for proper curing.

Avoid cross-rolling as the weight of the roller may cause roller lines and not produce a mottled appearance.

Be sure to lift the roller in a smooth continuous motion at each stop point to avoid puddles. Watch the product application video at www.dur-a-flex.com.

TOPCOAT

Depending upon system requirements, a second coat with CRYL-A-TOP T-301 or CRYL-A-PRIME P-101 with up to one ounce of CRYL-A-STAIN ADDITIVE (with the proper amount of CRYL-A-CURE) can be applied over part or the entire primed area. The topcoat is applied in the same manner as the primer coat without the addition of CRYL-A-BOND.

For slip resistant surfaces, a random broadcast of aluminum oxide is broadcast into the uncured resin. The typical particle size (depending on requirements) is in the 14-24-36 mesh size range. The broadcast rate is 1/2 - 1 LBS of grit per 200 SF (1 lb. = 8 volume ounces). Best results are obtained by broadcasting into the primer coat. Obtain samples and get approval prior to a large scale application.

DUR-A-GRIP can also be used in the final topcoat at the rate of 3 ounces per one gallon of CRYL-A-TOP. **It is highly recommended to use DUR-A-GRIP if aluminum oxide will not be used.** It is important to do an actual sample on site for approval of the look and texture.

CURE

Each application in the CRYL-A-STAIN system will cure in 45-60 minutes. At this time the floor is fully functional. **IMPORTANT:** Do not apply the material too thin and pay close attention to the edges. If applied thinner than the recommended coverage rates the system may not cure properly or it will attract dirt and wear pre-maturely.

PACKAGING

CRYL-A-STAIN ADDITIVE is available in 1 pint, 1 quart and 1 gallon cans. CRYL-A-PRIME P-101 and CRYL-A-TOP T-301 are available in 5 gallon pails and 50 gallon drums. CRYL-A-CURE is available in 1 gallon cans, 5 gallon pails and 50 LB. boxes.

TECHNICAL INFORMATION

CRYL-A-STAIN is part of a family of repair and overlay materials supplied by DUR-A-FLEX, Inc. If you require further information on this or any other of our products please contact our Technical Department.

JOINT GUIDELINES

Refer to the [Joint Guidelines](#) for complete details on our website

CLEANING

CRYL-A-STAIN is considered a low maintenance product. Please refer to the master "[Cleaning Guide](#)" for more detailed cleaning instructions.

STORAGE CONDITIONS

Store in a cool and dry area (below 85 F), and out of direct sunlight. Do not store near open flame or food. The shelf life is 6 months from ship date in the original unopened container.

CAUTION

CRYL-A-STAIN system resins are flammable liquids in their uncured state. Smoking, open flames or sparks are not permitted while handling this product. Workers should wear protective clothing consisting of splash-proof goggles, impermeable gloves and where exposure limits are exceeded, organic vapor respirators. Air powered or explosion proof mixing equipment is required. Adequate cross ventilation should be provided and explosion-proof fans may be required. All foodstuffs must be removed during application of the system. **Follow the Hazardous Materials Identification System labeling guide for proper personal protective equipment to use when handling this product. Use only as directed. KEEP OUT OF REACH OF CHILDREN. If substrate and/or material temperature is above 90 F Do Not apply material.**

Before using any DUR-A-FLEX, Inc. product, be sure the Material Safety Data Sheet is read and understood.