

## **CRYL-A-TEX**

**IMPORTANT!** Read these instructions carefully several days prior to starting your work. Seek answers to any questions you may have before you begin. DUR-A-FLEX, Inc. maintains a Technical Staff that will be glad to answer your questions and give you advice pertaining to your particular installation.

### **PRODUCT OVERVIEW**

CRYL-A-TEX is a 100% reactive, fast curing, high strength; methyl methacrylate (MMA) based polymer concrete. It is a three-component mortar consisting of a MMA liquid component, a powder component made from sands and fillers, and CRYL-A-CURE (BPO), which initiates the cure. The mortar can be extended with washed and dried pea gravel to produce a polymer concrete for deeper applications. This system cannot be thinned with solvents.

### **TYPICAL USES**

- Repair potholes, spalled and eroded concrete
- Rebuild pump bases
- Overlays
- Vertical surfaces (form)
- Rebuild joints
- Freezer repairs
- Cove base
- Bridge, highway and runway repair
- Structural repairs
- Sloping
- Grouting
- Anchor bolts
- Bearing pads

### **COLORS**

CRYL-A-TEX is available in Natural but can be pigmented with 4 fluid ounces of CRYL-A-COLOR in the following colors: Pebble Grey, Stone Grey, Silver Grey, Blue Grey, Sand Yellow, Brown Beige, Red, Green, Safety Yellow and White. Refer to the CRYL-A-FLEX Color Chart on our website.

### **SURFACE PREPARATION**

The substrate must be dry and free of oil, grease, dirt, bituminous and other contaminants. Unsound concrete and laitance should be removed by appropriate mechanical means. Edges of repairs should be keyed-in. The system is not designed to be “feather edged”. Refer to the DUR-A-FLEX Surface Preparation Guide for detailed instructions on our website.

### **DRAWINGS AND DETAILS**

Standard CAD drawings and details are available for coves, drains, breaches, transitions, etc. Please refer to our website.

### **MOISTURE CONCERNS**

Please refer to the Floor Evaluation Flow Chart in the Contractor’s Center of our website for a step-by-step process to determine the condition of the concrete.

### **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. *If required*, 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**

Prior to any application, proper “negative pressure” ventilation must be established. Refer to the CRYL-A-FLEX Ventilation Guidelines on our website for details.

## **JOINT GUIDELINES**

Refer to the Joint Guidelines for complete details on our website

## **APPLICATION METHOD**

NOTE: For each application of material and before mixing, mark your batches to ensure you achieve your spread rate targets. This is best accomplished by dividing your target spread rate by the width of the area being coated (or your planned wet edge). Example: If your spread rate is 100 square feet and your area is 20 feet wide you would make a mark every 5 feet (100 divided by 20 = 5).

### **Primer:**

Prior to installing CRYL-A-TEX the prepared substrate must be primed with CRYL-A-PRIME P-101. The typical batch size of primer is usually 1 gallon (4 liters). Warmer conditions may dictate a smaller batch size. The primer is applied with a brush or roller at 80 - 100 Sq Ft per gallon (2-3 m<sup>2</sup> per liter) to achieve an even, puddle free surface. Substrates that are very porous may require an additional coat. Roller coats are applied with a 3/8-inch (11 mm) or 1/2-inch (13 mm) nap roller. Rough substrates may require a longer nap to avoid puddles. Based on the temperature, add the proper amount of CRYL-A-CURE (BPO) to the CRYL-A-PRIME P-101. The proper amount of BPO can be found on the CRYL-A-FLEX Mix Chart on our website.

Mix for 30 - 60 seconds or until the BPO is completely dissolved. Pour an even ribbon of material out onto the floor and roll to the proper thickness. The primer will cure tack free in 30 - 60 minutes.

CRYL-A-BOND can be used to enhance the bond strength of the primer to the substrate. Add 16 ounces (1 pint) of CRYL-A-BOND to 1 gallon of P-101. If CRYL-A-BOND is used with P-101, the next coat must be applied within 16 hours. Failure to do this could result in inadequate inter-coat adhesion.

### **Mixing (Natural color):**

Material must be conditioned to the temperature at which it will be applied.

CRYL-A-TEX is best mixed with an 850 RPM drill and a 5" Jiffler mixing paddle.

As a mortar (without additional aggregate) the minimum amount of liquid is 48 ounces. For deeper repairs (1/2" and deeper) refer to the Cryl-A-Tex Mix Guide for the proper amount of pea gravel. Never make a "dry mix" and DO NOT add any sand. The pea gravel must be washed and dried. These limits are important because if the mix is too dry, it may not cure properly or have enough residual liquid to form a proper bond with the

primer. Too much liquid could result in shrinkage cracks.

For temperature ranges of **33F to 90F**, add 48 ounces of CRYL-A-TEX LIQUID to a clean 5 gallon pail. Add 11 ounces of CRYL-A-CURE and mix for 45 seconds. Slowly add 1 bag (31 LBS) of Cryl-A-Tex Powder (and pea gravel if needed) and continue to mix for 1 minute. For temperatures ranges of **32 F to 0 F** add 42 ounces of CRYL-A-TEX LIQUID to a clean 5 gallon pail. Add 6oz. of LTC ADDITIVE (Low Temperature Cure) and mix for 15 seconds. Add 14 ounces of Cryl-A-Cure and mix for 1 minute. Slowly add 1 bag (31 LBS) of CRYL-A-TEX POWDER (and pea gravel if needed) and continue to mix for 1 minute.

### **MIXING – pigmented:**

The total amount of liquid to be used in a batch of CRYL-A-TEX should **include** the 4 fluid ounces of CRYL-A-COLOR. For example, if the desired consistency is a 48 ounce batch of mortar, the batch will consist of 44 ounces of CRYL-A-TEX LIQUID, 4 ounces of CRYL-A-COLOR, 11 ounces of CRYL-A-CURE and 1 bag of CRYL-A-TEX AGGREGATE. To mix, add the CRYL-A-TEX LIQUID to a clean 5 gallon pail, pour the CRYL-A-COLOR in, mix for 15 seconds and follow the steps as described above for the specific temperature range.

### **Deep repairs:**

For applications over a 1/2 inch thick, the mortar is extended with PEA GRAVEL. The amount and size of the pea gravel to be used is determined by depth of the pour. Refer to the CRYL-A-TEX Polymer Concrete Mixing Guide on our website.

Pea gravel must be washed and dried. DO NOT add any sand to the mix. Any moisture or dirt on the surface of the gravel will result in a weak polymer concrete.

### **Installation method:**

CRYL-A-TEX is finished with conventional flat trowels, floats or screeds. The material handles similar to Portland cement concrete. Finish to achieve a smooth, closed surface.

### **CURE**

CRYL-A-TEX system will cure in approximately 1½ hours. At this time the polymer concrete is fully functional or ready for subsequent applications. However, as the CRYL-A-TEX cures to full hardness its temperature will increase. Be sure that the temperature of the CRYL-A-TEX has decreased to the original substrate temperature before applying subsequent coats. Also, when used for repairs or subsequent applications of other CRYL-A-FLEX systems, **the surface of the polymer concrete must be primed with CRYL-A-PRIME P-101.**

### **PACKAGING**

CRYL-A-TEX LIQUID is available in 1-gallon cans, 5-gallon pails and 50-gallon drums. CRYL-A-TEX POWDER is available in 31 lb bags. DUR-A-FLEX PEA GRAVEL is available in 50 lb bags in 1/8, 3/8 and 3/4 inch sizes.

### **STORAGE CONDITIONS**

Store in a cool, dry place 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 containers.

### **CAUTION**

CRYL-A-TEX LIQUIDS are flammable liquids in their uncured state. Smoking, open flames or sparks should not be permitted during the handling of the product. Workers should wear protective clothing consisting of splash-proof goggles, impermeable gloves and, where exposure limits are exceeded, an organic vapor respirator should be used. 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.

As with all chemical products, individuals may have different reactions to exposure to specific products.

This is dependent upon many factors, including the individual's personal characteristics, the size of the installation, the ventilation available, the intensity of the exposure or the length of the exposure. Individuals may experience discomfort during the installation process of one product, but not another.

In some cases this is experienced as a skin irritation and in others it is experienced as an inhalant irritation. Typically, it disappears once the exposure is eliminated. In some cases people can become "sensitized" to a product and experience the discomfort every time there is exposure without Personal Protective Equipment ("PPE").

To protect yourself from various exposures or discomfort during the mixing and application of our products, we recommend covering exposed skin including, using gloves, long sleeves, safety glasses and a respirator such as the 3M 8577 P95 Universal Disposable Carbon Respirator or a cartridge respirator.

Use only as directed.

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 Safety Data Sheet is read and understood.*