

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. Refer to our website at http://www.dur-a-flex.com/architects_center/default.aspx.

MOISTURE CONCERNS

Moisture vapor transmission in the slab should be measured prior to application of polymeric systems to ensure a long lasting installation. For MMA based Cryl-A-Flex systems the moisture vapor transmission should be no greater than 5 pounds per 1,000 square feet/24 hours per calcium chloride test.

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 for details on our website- <http://www.mmafloors.com/images/VENTguidelines.pdf>.

JOINT GUIDELINES

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

APPLICATION METHOD

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 - 125 Sq Ft per gallon (2-3 m² 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 54 ounces. For deeper repairs (1/2" and deeper) always use 64 ounces (1/2 gallon) of liquid. Refer to the chart below 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 54-64 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 **32F to -20F** add 54-64 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 54 ounce batch of mortar, the batch will consist of 50 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.

Using high loadings of gravel may result in not enough residual liquid to "wet out" the primer which could result in a bond failure. To avoid this, a wet slurry of mortar consisting of 64 ounces of CRYL-A-TEX LIQUID, 11 ounces of CRYL-A-CURE and 1 bag of CRYL-A-TEX POWDER is first placed to dissolve the surface of the primer. Then the filled system is immediately placed over this mix while it is still wet. When doing structural repairs or deep applications, steel reinforcing (re-bar) may be used. If re-bar is exposed during preparation, it should be fully exposed so that the polymer concrete will totally encapsulate it.

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 1 1/2 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. **Follow the Hazardous Materials Identification System labeling guide for proper personal protective equipment to use when handling this product. 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 Material Safety Data Sheet is read and understood.