

McKinnon Materials, Inc.

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General Information & Surface Preparation

I. CONCRETE

Surface preparation is as important as the selection of the correct coating or surfacer to be used. Two general conditions must be met for a successful application:

1. The concrete must be structurally sound and free of significant defects.
2. The surface must be free of contaminants that would interfere with adhesion.

A. There are many factors that can affect the strength and/or soundness of concrete. Some of these are: too little aggregate blend, too much water, excess retempering, too much air entraining agent, overworking the surface after the initial set has occurred and poor curing procedures. The results of some of these factors are not necessarily cause for concern when the concrete is not coated or when covered with a surfacer, but they become important when a protective surface is applied.

Overworking after the initial set can cause serious defects that are not obvious until a thick protection, such as glass mat reinforced liner, resin rich slurry coat, or aggregate filled surfacers using novolac resins as the binder is installed. Depending on the timing, such overwork can develop a weak strength line in the concrete from approximately 1/8 inch to 3/4 inch below the surface. The thick protection systems shrink somewhat as they cure and place some tensile stress on the concrete. These stresses can fluctuate with large temperature swings. The tensile strength of concrete does not often exceed 350-400 psi, but this is more than enough strength to withstand the stresses described. However, the weak area caused by overworking can have strengths below 150-200 psi and failures can occur there.

To ensure a successful application, the surface strength, as measured by a pull-off test, should be at least 250 psi. The pull-off consists of isolating a controlled area of the surface, bonding that area to a measuring device, and deterring the force required to cause tensile failure. An example of such instruments that can be used in the field is the PULL-OFF TESTER manufactured by PROCEQ, SA., of Zurich, Switzerland.

Failure in such a test, at the concrete surface with little or no concrete adhering to the adhesive indicates surface contamination. Failure with a thin line of cement and sand attached to the adhesive indicates low cement paste strength. Failure with significant amount of concrete attached to the adhesive, but at a level below 250 psi may indicate that overworking has occurred.

Any failure below 250 psi is cause for concern. The reason for the low figure must be determined and corrected before applying the protective system.

Other defects affecting the suitability of concrete to be coated are:

1. Poor compressive strength. A minimum of 3000 psi is usually adequate but unusual load factors may require higher values. Even if a surfacer has a compressive strength of 10,000-12,000 psi, failure can occur in the concrete below if its compression strength is not adequate for the service.
2. Delaminations. These occur for a variety of reasons. They can usually be detected by tapping the surface with a hammer or dragging a heavy chain across the surface. A "hollow" sound indicates delamination.
3. Protrusions such as, mortar spatter fins should be removed by grinding.
4. Spalled areas, pours areas, and voids such as "bird eyes" should be patched with a Portland cement based mortar or with a compatible polymeric patching compound.

Any concrete not meeting the above structurally sound condition must be replaced and properly cured before any protective system is applied.

When air entraining agents are used, long mixing times in the ready mix (long transit times or other "holds" on placement or excessive troweling can cause the entrained air bubbles to coalesce into voids or to collect at the surface to cause porous areas. These areas of porous concrete may require multiple coats of thin film protection to be applied.

They can also cause blisters if thick film protection is involved: air trapped wash in these areas under the surfacer of membrane, can expand before the protection cures.

Blisters can usually be controlled:

1. Seal the surface.
 - a. Apply a heavy primer coat and allow it to at least partially cure before proceeding.
2. Apply the primer and the topcoat or surfacer in the usual manner but choose conditions that allow cure before the temperature rises.
 - a. Shield the surface from direct sunlight.
 - b. Install after the maximum daytime temperature has passed and the temperature of the concrete and air are both falling. This may require night-time installation.

B. Surfaces that are structurally sound must still be cleansed of all contaminants to achieve satisfactory performance from the protective coating or surfacer.

1. Abrasive blast cleaning is the preferred method. Several types of abrasive blast cleaning equipment are available that hold dust to a minimum by vacuum collecting the abrasive and the debris developed during blasting. Heavily contaminated areas may require as scabber or scarifier to remove thick deposits and some of the structurally sound, but irretrievably contaminated, surface.
2. Where abrasive blast or mechanical cleaning is not feasible (or not permitted) cleaning can usually be accomplished by acid etching. Most often the acid because of its availability and rapid action, ACI (American Concrete Institute) recommends a less active, but safer, organic acid. Both acids can clean concrete well.

The order of cleaning steps is important as some steps are ineffective if the previous steps have not been performed.

- a. Blow off dust and debris with oil free compressed air.
- b. Remove water-soluble chemicals, oils, and some animal fats by scrubbing with a strong alkaline detergent such as sodium metasilicate or tri-sodium phosphate solution, follow by flushing with high pressure water. Heavy layers of oil, grease, asphalt, dirt or other contaminants should be removed by scraping before the detergent is

D. Several common failure modes are related to

applied. Animal fats are especially hard to remove. Best results are obtained by scrubbing with a 10% caustic solution in water followed by flushing with high-pressure potable water.

- c. Acid etch, using 1 volume muriatic acid mixed with 3-4 volumes of water at a rate of 2-2 1/2 gallons per 100 square feet. Scrub the acid solution into the concrete surface making sure not leave areas not scrubbed. The action of the acid will be evidenced by extensive bubbling and the formation of a scum. This action should be continued for 3-5 minutes before stopping. Do not allow the surface to dry: Flush with large volumes of potable water while scrubbing to help remove the scum and any loose particles.
- d. If acid etching does not produce bubbling action over the entire surface, some contamination is present that will almost certainly interfere with adhesion. This may be a curing compound, a clear seal coat or some similar material. It must be removed. Some type of paint remover may be required.

Not all of the above steps are always required. The action required depends upon what kind and how much contaminant is present. However, whatever steps are taken, they should be in the order shown above.

The acid, caustic and alkaline detergents described above present hazards to skin and eyes. Wear goggles, rubber gloves and body covering clothes when using them. Read the supplier's instructions carefully before beginning.

C. After the surface has been acid etched and rinsed, blow off the excess water with oil free compressed air and allow to dry. The surface should have the texture of rough sandpaper.

A final test after preparation is to place a small amount of potable water on the dry surface. The water should spread quickly and uniformly. If it beads or spreads in a non-uniform manner, further preparation is required.

In all cases of doubt as adequate surface preparation, a test patch of approximately 2ft. x 2ft. should be installed, allowed to cure, and tested for adhesion before proceeding.

Vinyl tile should be cleansed thoroughly with a wax

properties of the concrete and not directly to the protective system:

1. Cracks: When properly applied, a protective system is strongly bonded to the concrete. Any cracks that develop in the concrete will be reflected in the coating or surfacer.
2. Joints: Control joints and expansion joints are used because some movement of the concrete is expected. Thick film protection such as surfacers should have a joint at every joint in the concrete.
3. Blisters and Delaminations: Water in the concrete can cause these failures. Liquid water can become vapor as the temperature rises and the resulting pressure can cause blisters if the protective system has not cured enough to resist this pressure. Water collecting at the interface between the concrete and the protective system, after cure, can cause delamination.

The source of this water can be water taken-up in porous areas during cleaning, water remaining in partially cured concrete or ground water percolating upward through the concrete.

A relatively simple test for moisture content of concrete consists of placing a 2ft. x 2ft. sheet of plastic, such as polyethylene or PVC over the surface to be tested, secure the edges and leave for 24 hours. If an objectionable level of moisture is present, condensed moisture is present, condensed moisture is visible. However, at temperatures below 40F, the passage of moisture effective when the slab temperature is at least 40 degrees Fahrenheit.

The moisture content of concrete to be protected by McKinnon epoxy and polyester products must be no greater than 8% for satisfactory performance. This will vary for polymer modified cementitious products and for water based systems: refer to specific instructions for these items.

E. Determining when adequate preparations have been done, whether the concrete is sound enough for a specific installation or whether too much water will cause a failure is best accomplished with experience in making such decisions; there is no substitute.

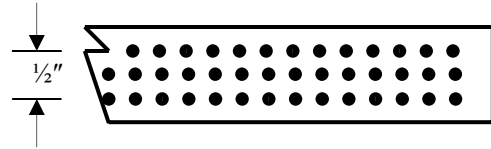
F. Aged epoxy surfaces should have the gloss removed by sanding, screening or shot blast and wiping with an aggressive compatible solvent such as N-methyl pyrrolidone (Mpyrole or equivalent).

removing compound. Because of the wide variety of tile compositions, a test application is recommended before coating a large area.

Wood should be sanded and all debris removed. Because of wide variations in porosity and grain raising, consult McKinnon Materials for guidance.

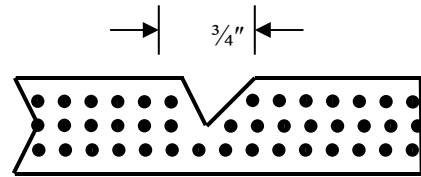
1. SAWCUT SLAB AT EXTENT OF FLOOR

Sawcut slab at all floor perimeters where surfacer will not abut vertical surface. Sawcut should be at a 90 degree angle to floor, maintaining a 1/2" depth.



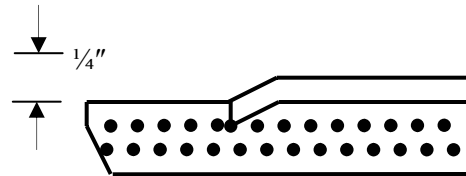
2. CHIP OUT CONCRETE

Chip out concrete with a chipping hammer. Chip toward saw cut. Vacuum debris. Width of chase should be no less than 3/4", and no more than 1 1/2".



3. INSTALL SURFACER

Prime and trowel surfacer into chase along with rest of floor.



COVE BASE DETAIL

1. PREPARE FLOOR AND WALLS

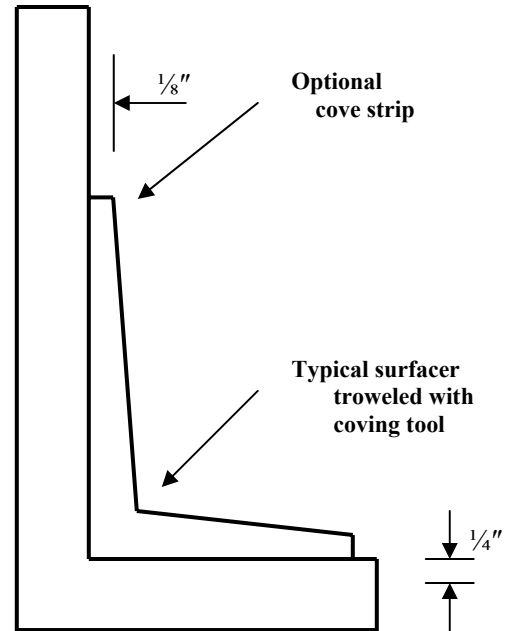
Prepare floor area and walls. Refer to Polymerica Technical Bulletin SP-C.

2. PRIME FLOOR AND WALLS

Snap a line along wall at desired height (2", 4", 6"). Apply tape above chalk line to ensure a neat edge. Cove strips can be specified to improved appearance of top edge. (see detail) Apply primer according to directions.

3. INTEGRAL MATERIAL APPLICATION

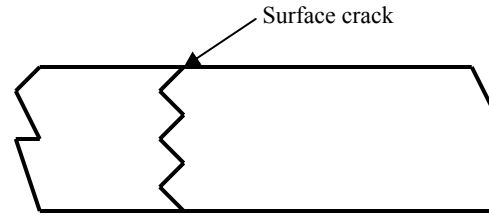
Apply surfacing material to wall and floor in one step using a coving tool. Remove tape before access to area is restricted by floor installation.



CRACK REPAIR

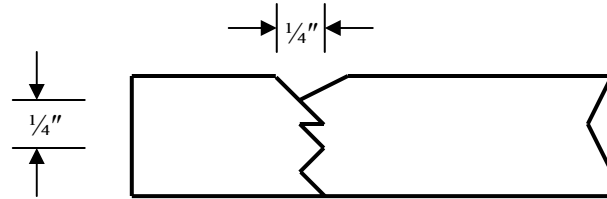
1. LOCATE CRACKS IN CONCRETE

Cracks larger than a 'hairline' and any cracks which are indicative of structural movement should be selected for routing. Cracks which are actually joints in the slab are dealt with later in this document.



2. CHIP OUT CONCRETE

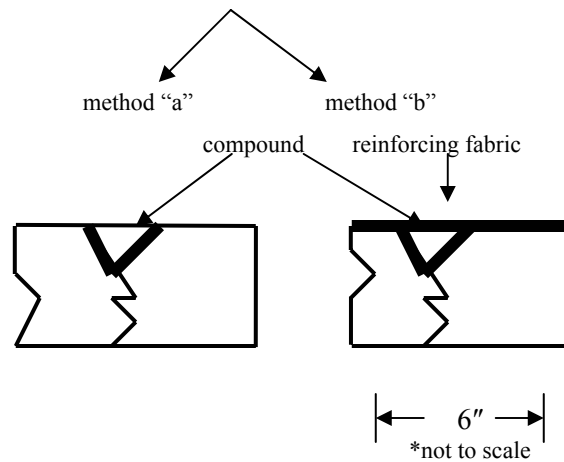
Method a) Chip out concrete with chipping hammer. Chip toward crack. Vacuum debris. Width and depth of chamfer should be no less than 1/4".



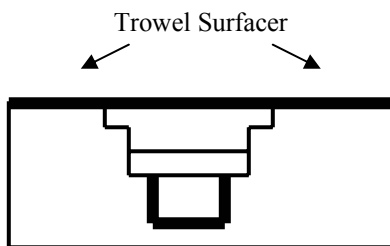
3. FILL CRACKS WITH COMPOUND

Method a) Mix according to directions. Pour neat into the chamfer level just below the surface of adjacent sides. If the floor is to be overlaid with a mortar system, fill chamfer to top as shown.

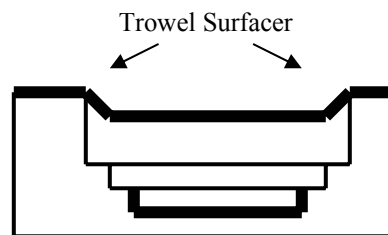
Method b) Mix according to directions. Pour neat to fill chamfer, continue pouring out a bead 6" wide over top of chamfer, with a thickness of 30-60 mils. Feather edges while it is still wet, set reinforcing fabric into compound.



FLOOR DRAIN DETAIL



New Construction Detail

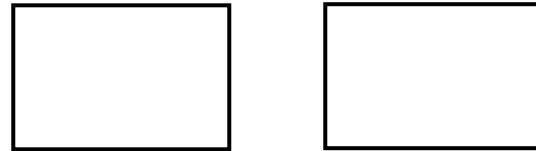


Retrofit Detail

JOINT DETAIL

1. LOCATE JOINTS IN CONCRETE

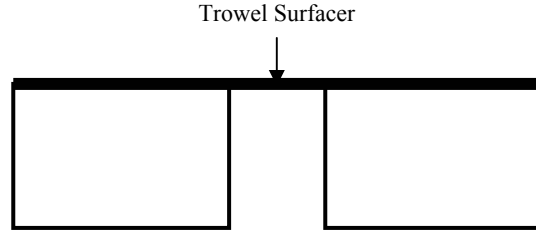
Locate all joints to be overlaid. Mark both ends of each joint location on walls, columns, or vertical abutment.



Slab cross section with joint

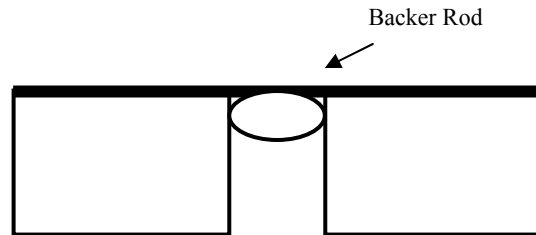
2. APPLY OVERLAYMENT OVER JOINT

Apply seamless flooring system over entire surface in accordance with directions. Allow floor to cure out.



3. FILL JOINT

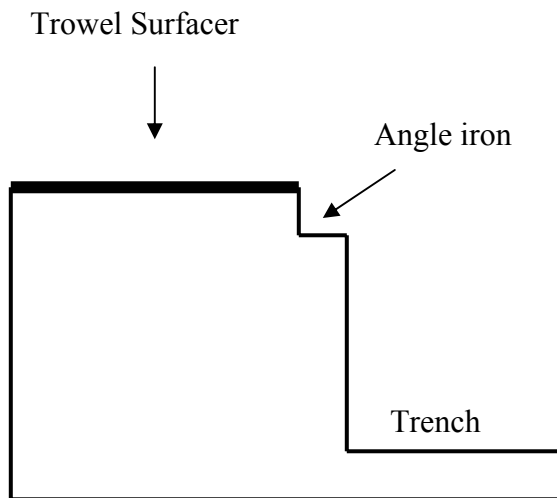
Using the marks as a guide snap lines over joints, and sawcut through overlayment into original joint. Install backer rod (generally at a depth equal to half the joint width) to contain compound. Mix joint compound according to directions. Pour neat into the joint to level just below the surface of adjacent sides.



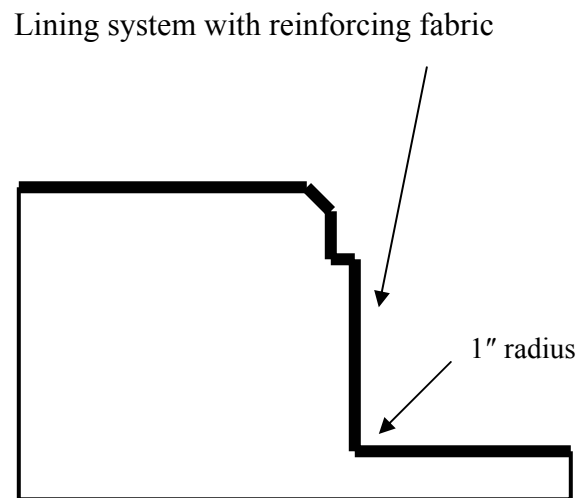
For non-working or control joints, backer rod is generally not used. Pour joint compound neat into the joint to level just below the surface of adjacent sides.

NOTE: Proper joint design is the responsibility of the facility engineer or architect. Please consult current ACI standard 504R for necessary guidance.

CONCRETE TRENCH DETAIL

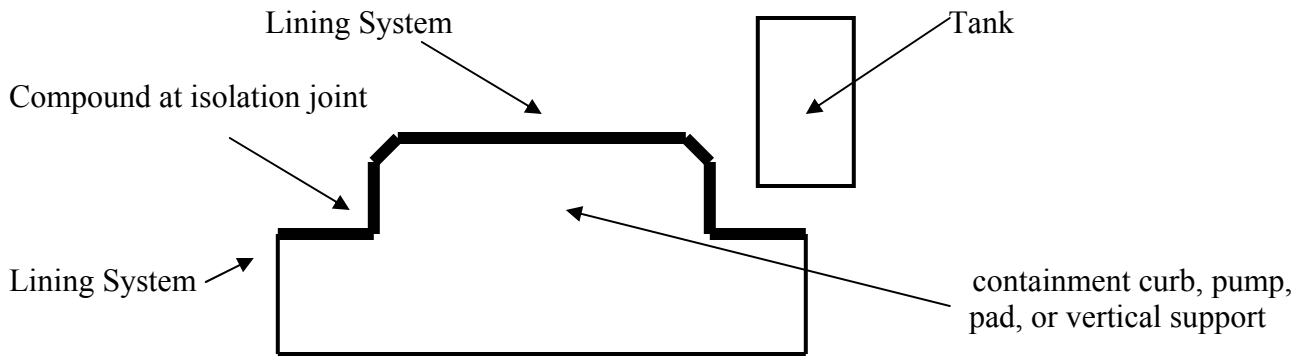


Unlined trench



Lined trench

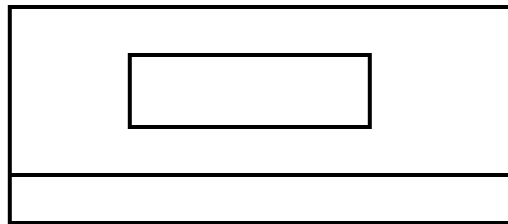
VERTICAL LINING TERMINATION



SMALL FLOOR PATCH DETAIL

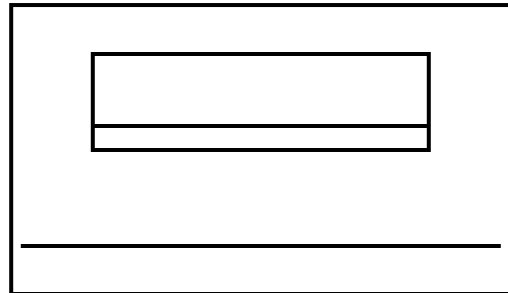
1. SAWCUT AREA PERIMETER

Snap a chalk line around area to be patched. If possible, make the area rectangular in shape, so that the finished patch will be more aesthetically pleasing. Make saw cuts into the flooring between $\frac{1}{4}$ " to $\frac{1}{2}$ ".



2. CHIP OUT BAD CONCRETE

Using a chisel or a chipping hammer, remove the affected material. Start approximately 2" inside of the saw cut, and chip towards outer edge. Working in from the saw cut might damage straight edge. Remove as much substrate as necessary to obtain $\frac{1}{4}$ " to $\frac{1}{2}$ ".



3. INSTALL SURFACE

Mix and apply trowel patching material according to directions. Screed top of surface to that it is level with adjacent surface, and finish trowel. Allow to cure. If sealing is desired, apply duct tape just outside the extent of the surface.

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Floor Care Recommendations

Epoxy and Urethane Systems

The following cleaning recommendations should be practiced weekly or more frequently as needed.

IMPORTANT! Only warm water should be used to clean within the first week.

- After the first week use only a non-chlorine cleaner diluted in water. (McKinnon Materials' E-Z Clean is a good product for this purpose)
- Sanitizing detergents that contain chlorine or hypochlorite should **never** be used.
- Spills must be removed and rinsed at the first opportunity.
- Sweep or vacuum loose dirt or debris.

McKrete and Deck Coat Overlay

The following cleaning recommendations should be practiced weekly or more frequently as needed.

- Hose the deck or patio frequently
- Clean with a mild detergent (McKinnon Materials' E-Z Clean is a good product for this purpose; Dawn dish liquid is also highly recommended)
- Spills must be removed and rinsed at the first opportunity.

Things NOT to do:

- Do **not** use muriatic acid to clean this flooring system
- Do **not** use any solvent or ammonia based cleaner to clean the flooring system
- Do **not** allow animal fats from a grill or stove to come in contact with the floor. Place a mat under the grill to protect the finish.

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INDUSTRIAL QUICK SET EPOXY

Physical Properties		Performance Properties	
Composition:	Two part component epoxy designed for industrial seamless flooring as a binder in aggregate fill trowable or broadcast compounds 6 to 1 was developed for those applications that require quick drying time (2-4 hours depending upon temperature and humidity) for immediate reapplication with no fumes.	Tensile Strength:	(ASTM D638 8000 PSI)
		Elongation:	(ASTM D638 7%)
		Hardness:	(ASTM – D2240 shore D) 78
		Comprehensive Strength:	(ASTM D695) 10,000 PSI
		Impact Strength:	Foot lbs per inch of 5 notch ASTM D-256
Solids Content:	100% solids		
Mix Ratio:	6 parts resin to 1 part cure	Abrasion Resistance	Grams weight loss 32mg loss federal test method standard 406 method 1091
Viscosity:	@ 77 degrees F cps 1,200		
Pot life:	@ 77 degrees F approximately 14 minutes	Chemical Resistance	
General Information:		Reagent	Rating
Application:	See general information Surface preparation R – recommended for continuous service L – limited recommendation occasional spills	Acetic Acid 10% Acetone Bleach Citric Acid 5% Crude Oil Ethyl Alcohol Gasoline Hydrochloric Acid 15% Lactic Acid 5% Methyl Ethyl Ketone Nitric Acid 5% Skydrol Sodium Hydroxide 50% Sugar solution 50% Sulfuric Acid 25% Toluene Trisodium Phosphate Xylene	R L R R R R R R R L R R R R R L R R
Coverage:	Coverage rates as a high build coating depend on the application technique substrate porosity and intended function		

	but for most applications, an average thickness of 5 to 15 mills will get 350 to 100 sq ft per gallon		
Drying Time:	6 to 1 should be allowed to cure 2-3 hours depending upon temperature and humidity due to quick curing time a sweat out may occur, requiring a damp mop with water, and mild solution or alcohol rub.		

Safety

Material Safety Data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved.

Workers should wear gloves and goggles when mixing or applying product. Clean up with soap and warm water. Be sure to follow all label and MSDS cautions.

Warranty

McKinnon Materials warrants its products to conform to its manufacturing standards. McKinnon Materials will replace or refund the purchase price of non-conforming product at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than two years from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product, product data or warranty.

Important Notice

These products are sold subject only to the express warranties contained herein. There are no other warranties by McKinnon Materials of any nature whatsoever expressed or implied. Including any warranties of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of the product. Information contained herein is based on data believed to be reliable; however it is the buyer's responsibility to satisfy itself of the product for a particular purpose. Material safety data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is

intended for use by professionals only. Keep away from children and those not trained in the use of potentially hazardous materials.

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INDUSTRIAL CLEAR EPOXY

Physical Properties		Performance Properties	
Composition:	Two part component epoxy system for use as a sealer, glaze or finish coat for industrial seamless flooring, or as a binder in aggregate filled trowable or broadcast compounds.	Tensile Strength:	(ASTM D638 8000 PSI)
		Elongation:	(ASTM D638 7%)
		Hardness:	(ASTM – D2240 shore D) 78
Solids Content:	100% solids	Comprehensive Strength:	(ASTM D695) 12,000 PSI
		Impact Strength:	Foot lbs per inch of 5 notch ASTM D-256
Mix Ratio:	3 to 1	Abrasion Resistance	Grams weight loss 32mg loss federal test method standard 406 method 1091
Viscosity:	@ 77 degrees F cps 1,200		
Pot life:	@ 77 degrees F approximately 28 minutes	Chemical Resistance	
General Information:		Reagent	Rating
Application:	See surface preparation R-recommended for continuous service L- limited recommendation, occasional spills	Acetic Acid 10% Acetone Bleach Citric Acid 5% Crude Oil Ethyl Alcohol Gasoline Hydrochloric Acid 15% Lactic Acid 5% Methyl Ethyl Ketone Nitric Acid 5% Skydrol Sodium Hydroxide 50% Sulfuric Acid 25% Toluene Xylene	R L R R R R R R R L R R R R R L R
Coverage:	Build coating depends on the application technique, substrate porosity and intended function, but for most applications, an average thickness of 5 to 15 mills will get 350 to 100 sq ft per gallon		
Drying Time:	Should be allowed to cure 12-18		

	hours at normal room temperature for light traffic, and 4-5 days for heavy traffic.		
Clean up:	Tools and mixing equipment should be thoroughly cleaned prior to gelation of the product. Typical solvents such as xylene and acetone may be used for cleaning.		

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STONE BOND EPOXY

PHYSICAL PROPERTIES:													
<u>Composition:</u>	Two part epoxy system for use as a binder with Chattahoochee River Rock, or as a sealer over existing Chattahoochee River Rock for applications of Stone Bond Epoxy in cold weather, or high UV concentrations, McKinnon Materials has developed a specific stone bond epoxy for the above applications.												
<u>Solids Content:</u>	100% solids												
<u>Mix Ratio:</u>	3 to 1												
<u>Viscosity:</u>	@ 77 degrees F												
<u>Pot Life:</u>	@ 77 degrees F approximately 25 minutes												
<u>General Information:</u>													
<u>Surface Preparation:</u>	All surfaces must be dry, clean and free from grease oil or foreign matter. A thorough pressure washing and cleaning is recommended.												
<u>Coverage:</u>	McKinnon Stone Bond Epoxy coverage, depends on the application technique, substrate porosity, most applications will be 200 sq ft for resealing and when mixed with stone aggregate (ie 50 lb bag) 3 bags to 1 gallon Stone Bond Epoxy approximately 33 sq ft per batch.												
<u>Drying Time:</u>	Tack free in 7 hours at 77 degrees F. (First 3 hours most critical)												
<u>Clean Up:</u>	Tools and mixing equipment should be thoroughly cleaned prior to gelation of the product. Typical solvents such as xylene, trowel slick, and acetone may be used for cleaning.												
<u>Performance Properties:</u>	<table> <tr> <td>Tensile Elongation</td> <td>(ASTM D-638)</td> <td>1-30%</td> </tr> <tr> <td>Hardness Shore D</td> <td></td> <td>75</td> </tr> <tr> <td>Tensile Strength</td> <td>(ASTM D-638)</td> <td>4000-10,000 PSI</td> </tr> <tr> <td>Heptone Resistance</td> <td>(ASTM D-543)</td> <td>None</td> </tr> </table>	Tensile Elongation	(ASTM D-638)	1-30%	Hardness Shore D		75	Tensile Strength	(ASTM D-638)	4000-10,000 PSI	Heptone Resistance	(ASTM D-543)	None
Tensile Elongation	(ASTM D-638)	1-30%											
Hardness Shore D		75											
Tensile Strength	(ASTM D-638)	4000-10,000 PSI											
Heptone Resistance	(ASTM D-543)	None											
<u>Shelf Life:</u>	12 Months (Unmixed). Color: Clear Flash Point: Cure – will burn at 200°F Resin – no response												
<u>Mixing Instructions:</u>	<p>Stone Bond Epoxy is a three to one ratio. Important: DO NOT VARY FROM THIS MIX RATIO.</p> <ol style="list-style-type: none"> 1. Place one quart of cure in container, add three quarts of resin. (USE SEPARATE MEASURING VESSELS FOR EACH COMPONENT.) 2. Mix for two minutes with a flat stirrer, scraping the sides to ensure proper mix. Let stand while loading mixer. 3. Pour into mixer, 150-180 pounds of stone (depending on the size of stone). 4. Run mixer approximately three minutes until stone is thoroughly saturated with Stone Bond Epoxy. 												
<u>Application Instructions:</u>	<p>Refer to batch mix sheet for correct ratio of aggregate to epoxy.</p> <ol style="list-style-type: none"> 1. Remove the mix to the wheelbarrow and dump into place. 2. Immediately spread with rake to the correct level. 3. Trowel smooth and tight. IMPORTANT: loosely troweled stone will cause a weak system. Use Trowel Slick as a trowel lube and AVOID excessive amounts on trowels or deck. 												

<u>Cleaning:</u>	Tools may be cleaned with soap and water immediately after application. NOTE: If tools are not cleaned within one half hour after being used, it will be virtually impossible to remove the Stone Bond Epoxy from your tools.
<u>Recommended Thickness:</u>	Recommended thickness for the river rock epoxy surface is: ½ inch thick for pool decks, patios, and walkways. For driveways, the river rock should be ¾ inch thick.
<u>Important Note:</u>	If the temperature is below 60°F, COLD WEATHER RESIN MUST BE USED.
	<p><u>Safety</u></p> <p>Material Safety Data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved.</p> <p>Workers should wear gloves and goggles when mixing or applying product. Clean up with soap and warm water. Be sure to follow all label and MSDS cautions.</p>
	<p><u>Warranty</u></p> <p>McKinnon Materials warrants its products to conform to its manufacturing standards. McKinnon Materials will replace or refund the purchase price of non-conforming product at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than two years from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product, product data or warranty.</p>
	<p><u>Important Notice</u></p> <p>These products are sold subject only to the express warranties contained herein. There are no other warranties by McKinnon Materials of any nature whatsoever expressed or implied. Including any warranties of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of the product. Information contained herein is based on data believed to be reliable; however it is the buyer's responsibility to satisfy itself of the product for a particular purpose. Material safety data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use of potentially hazardous materials.</p>

BASIC INSTALLATION

- I. Tools
 - A. Cement Mixer (3 cu.ft. capacity)
 - B. Wheelbarrow (s)
 - C. Iron-tooth rake to spread rock to approximate thickness
 - D. Trowel (for finishing of product)
 - E. Propane Torch (to remove any moisture)
 - F. Hammers
 - G. Chipping Gun (plane down concrete at thresholds)
 - H. Tapcon Drill and Tool

- II. Forming Materials
 - A. Forming Stakes
 - B. 1" x ____ (wood forms) for over pours and steps.
 - C. Cantilever forms (pool edges).

- D. Form Release (to keep product from sticking to forms)
- E. Tapcon Screws.

III. PREPARATION FOR DECK

- A. Must be clean and dry
- B. Follow existing expansion joints accordingly
- C. Remove spoiled or flaking concrete
- D. Build up or channel low lying areas for necessary drainage
- E. Asphalt or wood surfaces must have coat of epoxy applied prior to installation of river rock

IV. FORMING

- A. Wrap product around edges of deck that can be seen.
- B. Apply light coat of epoxy to vertical edge of substrate.

FORMING PROCEDURES:

Place forming stakes against edge of vertical substrate; this will space out from existing edge allowing product to fill in void between existing edge and form. Place pre-waxed form against stakes and install forming stakes to hold form in place.

FOR STEPS:

Follow above procedure except fasten form with tapcon or concrete nails. While installing river rock, remove spacing stakes as the river rock fills voids. Trowel top to smooth finish and level edge.

FORMING OF CANTILEVER EDGE:

Place a row of duct tape on pool tile. Top edge of tape should follow top edge of pool tile. Apply double face tape to foam then extender to the opposite side of the tape. Apply form adhesive to foam backing and glue backing to extender. Install concrete nails in concrete approximately one foot from edge of pool and space nails about every two feet around pool. If pool has straight edges use strips of 1x2 wood. If pool has curved edges, use strips of 2" masonite. Drill holes through wood backing. Place above mentioned backing strips against foam backing, pull tight and tie wire to nail.

After river rock is installed and hard, remove forms and cut tie wires even with rock edges. River rock dace needs to be ground slightly to smooth edge. After grinding and dust has been removed, apply light coat of epoxy to surface that has been ground.

V. MIXING OF MATERIAL

- A. Epoxy has a set mix ratio (do not vary). Mix three (3) equal parts resin to one (1) equal part of cure. Mix vigorously for at least two (2) minutes.
- B. Place correct poundage of desired pebble in cement mixer and add mixed epoxy.
- C. Let epoxy and stone mix until all stones have been covered with epoxy.

VI. FINISHING THE PRODUCT

- A. Place river rock at place of installation
- B. Spread evenly with rake
- C. Trowel to a smooth finish. In order to obtain a smooth finish, trowel must be occasionally cleaned with a proper solvent (Xylene, Trowel Slick, etc)

FINISHED PRODUCT SHOULD NOT BE WALKED ON UNTIL THE NEXT DAY!!!

CAUTION: Product should not be installed when temperature will not rise above 60°F. On such days, cold weather resin should be used.

BATCH MIXES:

NAME	BAGS	LBS	EPOXY	THICKNESS
Alabama Rainbow 3/16	3	150	1 gal	½ "
Alabama Rainbow 5/16	3	150	1 gal	½ "
Apache	3	150	1 gal	½ "
Coral ¼ x ⅛	3	150	1 gal	½ "
Gray Green Flint	1	100	1 gal	⅛ x ¼ "
Light or Dark 3/16	3	150	1 gal	½ "
Light or Dark 5/16	3	150	1 gal	½ "
Multi-Colored Flint	1.5	150	1 gal	½ "
Pearl or Mini Pearl	3	150	1 gal	⅛ x ¼ "
Texas Rainbow 5/16	3	150	1 gal	½ "

3M Colorquartz™ Aggregate

Colorquartz aggregate is comprised of tough, color-coated inorganic quartz particles designed for use in variety of demanding architectural applications including epoxy seamless flooring and cement-based swimming pool finishes. Each Colorquartz aggregate granule is ceramically coated by an exclusive 3M process that bonds permanent inorganic pigments to the quartz for color that has been proven to last in the harshest of environments.

General Data

Property	Measuring Standards & Conditions	Results
Hardness	Moh's Mineral Scale	6.5 – 7
Bulk Density	ASTM C 29	
S-grade		104-108 lb./ft ³ (packed)
T-grade		94-98 lb./ft ³ (packed)
Moisture Content	ASTM C 566	Does not exceed 0.5%

Chemical Resistance Data**

Acid Resistance	Concentration (%)	Reaction	Alkaline Resistance	Concentration	Reaction
Acid Material			Alkaline Material		
Nitric Acid	70	None	Trisodium Phosphate	40	None
Hydrochloric Acid	37	None	Sodium Carbonate	40	None
Acetic Acid	100	None	Ammonium Hydroxide	28	None
Sulfuric Acid	96	None	Industrial Detergent	1 part to 2 parts water	None
Chromic Acid	82	None			
Aluminum Sulfate (90 hours immersions)	25	None			
Trichloro-s-triazentrione	Saturated	None			
			** Liquid immersion was for 18 hours		

Sieve Specifications

Property	Measuring Standards & Conditions	Results		
		U.S. Sieve	% Retained	Colors
Grade S (Spherical Shape)	ASTM D 451	20 30 40 50 70 -70	0-2 5-17 47-67 20-35 2-8 0-1	S Grade is available in 12 colors 2063 Red 4013 Brown 7043 Grey 2163 Plum 5013 Black 7133 Smoke 3033 Green 6023 Tan 8043 Blue 3143 Cayman Green 6073 Buff 9073 White
Grade T (trowelable)	ASTM D 451	12 -40	0-5 0-2	T Grade is available in 5 colors 2065 Red 5015 Black 9075 White
				3145 Cayman Green 8045 Blue

Important notice to purchaser:

All statements, technical information and recommendations contained in this literature are based on tests conducted with 3M approved equipment and are believed to be reliable. However, the accuracy or completeness of the tests are not guaranteed. THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESS OR THE IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. The seller's and manufacturer's only obligation will be to replace the quantity of the product proved to be defective. Neither the seller nor 3M will be liable for any injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product. Before using, the user must determine the suitability of the product for his or her intended use. This notice may not be changed except by an agreement signed by an officer of the seller.

McKinnon Materials, Inc.

5612 56th Commerce Park Blvd.

Tampa FL, 33610

Phone: (813) 622-7031 Fax: (813) 621-9017

Protective Coatings / Miracle Glaze / Acrylic Urethane

<u>Physical Properties</u>		<u>Chemical Resistance</u>	
Composition:	Two components, conventional solids hydroxyl aliphatic acrylic resin designed to cross-link at room temperature with polyisocyanates to produce high performance coatings.		
		Reagent	Rating
Color:	Various R -recommended for continuous service L - limited recommendation, occasional spills	Acetic Acid 5% Acetone Bleach Citric Acid 30% Crude Oil Diesel Fuel Ethylene Glol Fatty Acids Gasoline Hydrochloric Acid 15% Lactic Acid 15% Methyl Ethyl Ketone Nitric Acid 5% Skydrol Sodium Hydroxide 50% Sulfuric Acid 25% Toluene Ursa Vinegar Xylene	R R R R R R R R R R R R R R R R R R R R
Gloss:	Greater than 90 cbo°		
Weight/Gallon:	8.0 +/- 0.2 pounds (mixed)	This chart is intended as an aid in evaluating the performance of these systems in various chemical exposures @ 75F. The dates is intended as a guide only in severe or combination exposures a sample should be tested under actual or simulated use conditions.	
Solids Content:	38%	Product data is revised as needed to reflect the most recent technology and field experience. Consult McKinnon Materials for current printing date of literature.	
Mix Ratio:	1A:6B by volume		

Pot Life:	1 hour @ 70 degrees F		
% Non-Volatile by Weight	45 +/- 2%		
% Non-Volatile by Volume	39 +/- 2%		
Viscosity: *Custom colors available with restrictions	22 +/- 5 seconds #2 Zahn		
PERFORMANCE PROPERTIES:			
Tensile Strength (ASTM D-638):	5500 psi		
Elongation (ASTM D-638):	5%		
Adhesion To steel (ASTM D-454) To concrete (ACI COMM #403)	1000 psi 500 psi (concrete fails)		
Hardness (ASTM D-2240)	85 (Shore D)		
Abrasion Resistance:	0.0353 mg loss (CS 1000 cycles)		
Dry Time:	Tack Free – Less than 15 minutes Dry Hard – Less than 1 hour Full Cure – 72 hours		
SUBSTRATE	COLD ROLLED STEEL		
Pencil Hardness	3H		
100 MEK Double Rubs	No effects		
IMPACT: Direct Indirect	80 80		
QUV EXPOSURE: Gloss @ 1000 hrs E @ 1000 hrs	89/77 1.4		
PERFORMANCE PROPERTIES: TECHNICAL INFORMATION Acrylic Urethane is a two component, conventional solids hydroxyl aliphatic acrylic resin designed to cross link at room temperature with polyisocyanates to produce high performance coatings. The high equivalent weight of this resin means that less polyisocyanate is required for cross linking, therefore making coating formulated with Acrylic Urethane very economical. In addition, the following performance characteristics make Acrylic Urethane a worthy competitor in the field of low cost polyurethane coatings.			

VERY FAST DRY LONG POT LIFE EXCELLENT HARDNESS GOOD CHEMICAL RESISTANCE EXCELLENT WEATHER RESISTANCE	
	RESIN SPECIFICATIONS:
Viscosity	X-Y
Color	1 maximum
Weight/Gallon	8.3 +/-0.1 pounds
Nonvolatile by weight	60+/-1%
Solvent	Xylene
Equivalent Weight Solution Nonvolatile	1000 600
COATING PROPERTIES: Tack Free 10 minutes Dry Through 1 hour Dry to Tape 5 hours	
SUBSTRATE	COLD ROLLED STEEL
Gloss (60/20)	102/98
Crosshatch Adhesion	5A
Miracle Glaze is a two component acrylic/urethane system. Part A contains polyisocyanates, xylene and butyl acetate. Part B contains hydro carbons. Workers should wear gloves and goggles when mixing or applying product. Clean up with soap and water. Be sure to follow all label and MSDS cautions.	

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HI PERFORMANCE URETHANE

<u>Product Description:</u>	Two component polyester/aliphatic polyurethane floor sealer that exhibits excellent characteristics for abrasion resistance, chemical resistance, flexibility, weathering, and UV stability. Clear and other gloss.		
<u>Recommended For:</u>	Recommended for auto service centers, warehouses, computer rooms, laboratories, aircraft hangers, cafeterias, exterior tanks, indoor or outdoor service and chemical exposure areas.		
<u>Application Method:</u>	Lambs wool applicator or high quality 3/8" nap solvent resistant roller.		
<u>Primer:</u>	Clear or Colored 3:1 Industrial Epoxy		
<u>Top Coat:</u>	None recommended	<u>Recommended Film Thickness:</u>	3-5 mils per coat wet thickness (yields 2-3 mils dry)
<u>Solids by weight:</u>	Mixed= 60% (colors); 56% (clear) (+, - 2%)	<u>Solids by volume:</u>	Mixed= 53%(colors); 53%(clear) (+, - 2%)
<u>Coverage per gallon:</u>	320 to 500 square feet @ 3-5 mils wet thickness		
<u>VOC:</u>	Less than 3.8 pounds per gallon	<u>Chemical Resistance</u> Reagent acetic acid 5% xylene mek methyl alcohol gasoline 10% sodium hydroxide 50% sodium hydroxide 10% sulfuric acid 10% hydrochloric acid 20% nitric acid ethylene glycol	Rating C E B B D E D D D C D Rating Key: A – not recommended B – 2 hr term splash spill C – 8 hr term splash spill D – 72 hr immersion E – long-term immersion
<u>Mix Ratio:</u>	2 part A to 1 part B by volume		
<u>Finish characteristics</u>	High gloss (>80 at 60 degrees @ Erichsen glossmeter)		
<u>Shelf Life:</u>	1 year		
<u>Application Temperature:</u>	45 – 90 degrees F		
<u>Packaging Information</u>	3 gallon and 15 gallon kits; 3 gal kit= 2 part A (10.5#/gal-colors) or (8.75#/gal-clear) and 1 gallon part B (8.5#/gal) (weights and volumes approximate)		
<u>Cure Schedule (70°F):</u>	Pot Life – 1 ½ gallons by volume.....2-5 hours Tack free (dry to touch).....2-4 hours Recoat or topcoat.....4-8 hours Light foot traffic.....14-24 hours Full cure (heavy traffic).....3-5 days		

PERFORMANCE PROPERTIES

<u>Abrasion Resistance</u>	Taber Abraser CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 20.0 mg loss
<u>Impact Resistance</u>	Gardner Impact, direct & reverse = 160 in.lb. (passed)
<u>Adhesion</u>	360 psi @ elcometer (concrete failure, no delamination)
<u>Flexibility</u>	No cracks on a 1/8" mandrel
<u>Viscosity</u>	Mixed = 200-400 cps (typical, most colors)
<u>Hardness</u>	Shore D = 72

Safety

Material Safety Data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved.

Workers should wear gloves and goggles when mixing or applying product. Clean up with soap and warm water. Be sure to follow all label and MSDS cautions.

Important Notice

These products are sold subject only to the express warranties contained herein. There are no other warranties by McKinnon Materials of any nature whatsoever expressed or implied. Including any warranties of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of the product. Information contained herein is based on data believed to be reliable; however it is the buyer's responsibility to satisfy itself of the product for a particular purpose. Material safety data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use of potentially hazardous materials.

1) **PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degree F.

2) **SURFACE PREPARATION:** Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete is dry; this can be done by placing a 4' X 4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.

3) **PRODUCT MIXING:** This product has a two to one mix ratio by volume- merely mix two gallons of part A with 1 gallon of part B. After 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. Avoid whipping air into the coating. Improper mixing may result in product failure.

4) **PRODUCT APPLICATION:** The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Too thick of an application may result in solvent entrapment and product failure.

5) **RECOAT OR TOPCOATING:** Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is

Warranty

McKinnon Materials warrants its products to conform to its manufacturing standards. McKinnon Materials will replace or refund the purchase price of non-conforming product at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than two years from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product, product data or warranty.

created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants are present on a previous coat, remove with a standard detergent cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hour passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond.

6) **CLEANUP:** Use ketone solvents

7) **FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

8) **RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle.

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. **NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT.** We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may **CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.**

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Super Vinyl Supreme

<u>Physical Properties</u>		<u>Safety:</u>
<u>Composition:</u>	Solvent based acrylic, used as a sealer on ceramic and acrylic based products such as McKrete.	DANGER! EXTREMELY FLAMMABLE – CONTAINS XYLENE. Keep away from heat sparks and flame. To avoid breathing vapors or spray mist. Open windows and doors or other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or wear respiratory protection (MOSH/MSHA TC23C or equivalent) or leave the area. Close container after each use and avoid contact with skin.
<u>Color:</u>	Clear	<u>Warranty</u> McKinnon Materials warrants its products to conform to its manufacturing standards. McKinnon Materials will replace or refund the purchase price of non-conforming product at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than two years from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product, product data or warranty.
<u>Gloss:</u>	Sheen	<u>Important Notice</u> These products are sold subject only to the express warranties contained herein. There are no other warranties by McKinnon Materials of any nature whatsoever expressed or implied. Including any warranties of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of the product. Information contained herein is based on data believed to be reliable; however it is the buyer's responsibility to satisfy itself of the product for a particular purpose. Material safety data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use of potentially hazardous materials.
<u>Solids by weight:</u>	36%	
<u>Viscosity:</u>	#2 Zahn 21-22 sec	
<u>VOC:</u>	600 grams (5 lbs/GL)	

General Information:

Dry time @ 70 degrees:	Dry to touch approximately 1 hour depending upon temperature in humidity	
Product Advantages:	Resists tire marks Resists mildew	
Application:	Recommend roll on or spray. When applying with a short nap roller (3/8" nap) DO NOT APPLY excessive pressure on the roller, roll with light to medium pressure. Apply vinyl supreme top coat evenly, do not leave puddles or roller marks. Do not apply to areas where standing water is evident.	
Caution: DO NOT apply in temperatures below 50 degrees F to a damp surface or excessively hot surfaces, for example direct sunlight on a hot day, drying may occur too rapidly, causing trapped vapors to bubble. If this occurs, we recommend application during a cooler time of day. Keep away from children. Keep away from direct heat and open flame.		

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McKrete

PHYSICAL PROPERTIES

McKrete is a cementitious acrylic compound, combines with water based epoxies and polyocrylates to create functional, durable floor systems for exterior and interior systems.

PERFORMANCE PROPERTIES:

	Unmodified Cement	Design McKrete		Unmodified Cement	Design McKrete
Tensile Strength (PSI) 28-Day Air Cure 28-Day Wet Cure	235 615	614	Impact Strength (in LB) 28- Day Air Cure 28- Day Wet Cure	6 7	18
Comprehensive Strength (PSI) 28-Day Air Cure 28-Day Wet Cure	2390 5795	5796	Wet Curing Conditions 1 day at 25C and 90% Relative humidity 6 day water immersion at 25C 7 days at 25C and 50% Relative humidity 7 day water immersion at 25 C 7 days at 25 and 50% Relative humidity		
Flexural Strength 28-Day Air Cure 28-Day Wet Cure	610 1070	1586			
Shear Bond Adhesion (PSI) 28-Day Air Cure 28-Day Wet Cure	45 (A) 185 (A)	649 (C)	Adhesive failure indicated by (A) Cohesive failure indicated by (C)		

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Acrylic Paints / Concrete Sealer

PHYSICAL PROPERTIES:															
<u>Composition:</u>	McKinnon Materials Concrete Sealer is a deep penetration solvent based water repellent sealer for use on concrete driveways garages, pool decks, patios, vertical block, split face block masonry walls and any other concrete and masonry surface that needs protection and beautification. Our sealer has a unique formulation of silicone/acrylic which allows for deep penetration into concrete to give a very long lasting color and protection. Although a water based version is carried in our product line, solvent based sealer is recommended for penetration into concrete and acrylic surfaces.														
<u>Solids Content:</u>	27%/volume														
<u>Solids Weight:</u>	44%/volume														
<u>Coverage:</u>	100 to 250 sq ft per gallon, depending upon porosity and texture of surface														
<u>VOC Content:</u>	Less than 600 gpl/5 lb/gl														
<u>General Information:</u>															
<u>Application:</u>	Apply with roller, spray or brush. Work the coating into the surface to prevent penetration bubbles. For most applications two coats are recommended. May be recoated in 12 hours under good drying conditions.														
<u>Surface Preparation:</u>	<p>All surfaces to be sealed must be free of dirt, dust, oil grease mod and mildew, curing compounds and other sealers. Oil and grease should be scrubbed clean with a detergent or trisodium phosphate diluted in water. Mildew should be killed with chlorine. Best results will be obtained with additional pressure cleaning. New or bare concrete should be etched with muriatic acid (1 part acid 2 parts water allows acid solution to react for 15-20 minutes on the surface. Do not allow the solution to dry out</p> <p>Smooth trowelled concrete must be etched until a grit sand paper like feel is obtained. Etching opens up the pores of the concrete to allow penetration of the stain. Concrete should then be thoroughly pressure washed or rinsed thoroughly with water and allowed to completely dry (24 hours min.) before staining</p> <p>McKinnon Materials concrete sealer may be applied over most xylene based acrylic stains if they are firmly bonded to the surface. A small test patch is recommended. Our concrete sealer will not adhere satisfactory to epoxies, polyurethanes, alkyds, water based floor paints, silicate sealers, curing compounds, and membranes surface hardeners. A test patch adhesion is recommended prior to recoating.</p>														
<u>Drying Time:</u>	Dry to touch in, approximately 15 minutes. Recoat and light traffic 12 hours, vehicles 72 hours. Dry times are for 75 degree F temperatures and medium humidity's. Low temperatures will extend drying and curing time. Moisture and dew on the surface will stop the curing until the surface dries again.														
<u>Performance Properties:</u>	<table> <tr> <td>AIM Category</td> <td>Water Repellant Sealer</td> </tr> <tr> <td>G-23-F</td> <td>2000 hrs</td> </tr> <tr> <td>TT-C555B</td> <td>No effect</td> </tr> <tr> <td>Light Stability</td> <td>Excellent</td> </tr> <tr> <td>Abrasion Resistance</td> <td>Excellent</td> </tr> <tr> <td>Gasoline Resistance</td> <td>Limited</td> </tr> <tr> <td>Chemical Resistance</td> <td>Good-Avoid strong cleaner, degreasers</td> </tr> </table>	AIM Category	Water Repellant Sealer	G-23-F	2000 hrs	TT-C555B	No effect	Light Stability	Excellent	Abrasion Resistance	Excellent	Gasoline Resistance	Limited	Chemical Resistance	Good-Avoid strong cleaner, degreasers
AIM Category	Water Repellant Sealer														
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<p><u>Limitations:</u></p>	<p>Do not apply when air or surface temperatures exceed 90F or lap marking/bubbling may occur.</p> <p>Do not apply to wet or damp concrete. Excessive moisture in the concrete will inhibit the penetration of the stain and cause improper curing. Flaking or lifting of the stain may later occur.</p> <p>Do not apply when it may rain or if dew may condense on the surface before paint will have chance to dry.</p> <p>Allow for slow drying during cold weather and high humidity.</p> <p>Resistance to oil and grease, and most household and pool chemicals; but gasoline will soften the coating. If gasoline is spilled, allow it to evaporate rather than wiping up—the coating will then recover and harden. Also, note that muratic acid and concentrated bleach may cause some discoloration and should be rinsed off immediately.</p> <p>Do not apply over stamped concrete installed prior to 1997. Stamped concrete is usually put down with form oils, hardeners, silicate sealers, waxes, polyurethane clears and stains. All or any of these will cause adhesion problems. A test patch and adhesion test is recommended. Follow instructions for previously coated concrete.</p> <p>Not for use below grade or in areas subjected to hydrostatic pressure.</p>
	<p><u>Safety</u></p> <p>Material Safety Data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved.</p> <p>Workers should wear gloves and goggles when mixing or applying product. Clean up with soap and warm water. Be sure to follow all label and MSDS cautions.</p>
	<p><u>Warranty</u></p> <p>McKinnon Materials warrants its products to conform to its manufacturing standards. McKinnon Materials will replace or refund the purchase price of non-conforming product at the seller’s option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than two years from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product, product data or warranty.</p>
	<p><u>Important Notice</u></p> <p>These products are sold subject only to the express warranties contained herein. There are no other warranties by McKinnon Materials of any nature whatsoever expressed or implied. Including any warranties of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of the product. Information contained herein is based on data believed to be reliable; however it is the buyer’s responsibility to satisfy itself of the product for a particular purpose. Material safety data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use of potentially hazardous materials.</p>

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Chromastain/ Chromastain Reducer

Environmentally friendly water-based stain designed specifically for acrylic concrete overlay systems in addition to concrete surfaces; penetrates the acrylic concrete, adheres to the surface, and is self sealing; may be applied up to three times on the same area; extremely user friendly and can be sprayed as well as rolled or sponged onto surfaces.

PERFORMANCE PROPERTIES:

Appearance	Stain: Red, Yellow, Green, Brown, Black; Reducer: white	
Chemical Description	Pure Acrylic Latex	
Typical Properties	Physical Form	White
	Total Solids %	11.1 – 12.5
	Specific Gravity	1.05
	Density, #/gal	8.45
	Tg, °C (onset)	42
	Ph, 20°C	7.0 – 9.0
	Viscosity at 22°C, cps	50 - 400
Applications	An acrylic latex stain solution intended to be used to stain or color the surface of any porous substrate such as, but not limited to, wood, concrete acrylic, modified coatings (overlays, acrylic deck overlays, acrylic modified concrete, paint)	
Safety Handling	Chromastain may contain traces of residual monomers, therefore adequate ventilation should be employed.	
Characteristics	1. Water blush resistance 2. Early water and moisture resistance 3. Good exterior weatherability and U.V. resistance 4. Very good adhesion and penetration of concrete substrates.	
Packaging	5 gal plastic pail 1 gal plastic or metal can	
	Instructions for use: 1. Chromastain™ is formulated to be user friendly. It is designed to be used full strength straight out of the bottle, or if you wish to lighten the stain color you can use the bottle marked “reducer” to do so. You can also achieve other colors by combining any of the colors. 2. Application Method: (You can use any of the following methods): a. Use the included sprayer to spray the color, or a pump up sprayer, or any other type of spray equipment. b. Sponge to place the stain c. Rag the color on d. Brush or roller can be used to apply color 3. Using on a full-scale job: a. McKinnon Materials’ preferred application is done with a pump up sprayer; simply load the sprayer with the lightest color that you are going to be using, such as yellow, and	

then take the sprayer and either solid coat the surface with it or just spray spots all over. Then take the next color such as red and do the same. After this, lightly spray the entire surface with brown. [colors mentioned are only an example]

- b. Wrapping up your job: After the stain is dry, it is required that you put on 2 coats of sealer. This can be either water- or solvent-based depending on your requirements or preference. Included in your kit is 16oz of Diamond Glaze that you may use to seal the Chromastain™. ****Important!** Two thin coats are required for the Diamond Glaze as this is a urethane acrylic and will produce a satin finish (apply with a brush or roller).

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Deck Coat Overlay

PHYSICAL PROPERTIES:			
<u>Composition:</u>	A technically advanced, one component acrylic/polymer modified scientific blend of cements, select graded silica, and special additives.		
<u>Characteristics:</u>			
<u>Boiling Point:</u>	N/A		
<u>Vapor Pressure:</u>	N/A		
<u>Solubility in Water:</u>	1%		
<u>Appearance and Odor:</u>	White powder. No odor.		
<u>Specific Gravity:</u>	2.5		
<u>Flammable Limits:</u>	N/A		
<u>Stability:</u>	Stable		
<u>Hazardous Decomposition:</u>	CO, CO ₂ , Silicon tetra fluoride (with hydrofluoric acid)		
<u>Hazardous Polymerization:</u>	Will Not Occur		
Performance Properties:			
Comprehensive Strength ASTM C-109	28-Day Air Cure	3750psi	
Flexural Strength ASTM C-348	28-Day Air Cure	775psi	
Tensile Strength ASTM D-190	28-Day Air Cure	375psi	
Bucket Life	@ 72°F	Approx 3 hrs	
Dry Time	@ 72°F	At ¼ inch thick	Approx 12 hrs
<u>Limitations:</u>	Do not apply when the temperature, materials, or <u>substrates</u> are below 55°F. Do not apply under rainy conditions. Do not use for installations requiring acid and industrial chemical resistance.		
<u>Mixing:</u>	Pour approximately 5-6 quarts of water in a clean pail, then pour the powder slowly while stirring to avoid lumps. Mix until free of lumps, let stand for 2-3 minutes, then remix. Add universal colorant at this time if an internal color is desired. McKrete Overlay can be mixed with standard, universal colorants.		
<u>Coverage:</u>	Approximately 35 sq.ft. at ¼ inch. Note: coverage will vary depending on smoothness of substrate and texture of finish desired.		

<u>General Data:</u>	
<u>Preparatory Work:</u>	All surfaces must be structurally sound and free of grease, oil, dirt, mildew, dust, wax, curing compounds.
<u>Expansion Joints:</u>	<u>Do Not</u> fill existing expansion and control joints.
<u>Safety:</u>	Caution, may cause eye, skin or lung injury. Contains free silica. Prolonged exposure to dust may cause delayed lung disease. Eliminate exposure to dust. Use NIOSH approved mask fro silica. Avoid contact with skin when possible, and wash exposed areas.

Safety

Material Safety Data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved.

Workers should wear gloves and goggles when mixing or applying product. Clean up with soap and warm water. Be sure to follow all label and MSDS cautions.

Warranty

McKinnon Materials warrants its products to conform to its manufacturing standards. McKinnon Materials will replace or refund the purchase price of non-conforming product at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than two years from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product, product data or warranty.

Important Notice

These products are sold subject only to the express warranties contained herein. There are no other warranties by McKinnon Materials of any nature whatsoever expressed or implied. Including any warranties of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of the product. Information contained herein is based on data believed to be reliable; however it is the buyer's responsibility to satisfy itself of the product for a particular purpose. Material safety data sheets are available from McKinnon Materials and should be consulted prior to use of the product. This product is intended for use by professionals only. Keep away from children and those not trained in the use of potentially hazardous materials.