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Quarry-Tek Specifications (Resinous Flooring)

NOTE: This specification covers the requirements for troweled-on industrial, commercial, residential, and marine resinous flooring in general and specifically, Quarry-Tek.

1.0 GENERAL

1.1 Submittal

- 1.1.1 Instructions and Manufacturer's Directions for Application.
- 1.1.2 Qualifications of Installers – a written statement from the floor manufacturer stating that the installer is certified and acceptable.
- 1.1.3 Samples – cured samples of each floor finish or color combination.
- 1.1.4 Maintenance Instructions – manufacturer's recommendations for cleaning and maintenance.

1.2 Delivery and Storage

Deliver the materials to the project site in unopened containers labeled, clearly showing the manufacturer's name and type of material. Do not store material near fire or sparks. Maintain the storage area between 60 and 90 degrees F. Low temperatures or temperature fluctuation may cause crystallization.

1.3 Environmental Conditions

Maintain the ambient room and floor temperature at 70 degrees F or above, (no lower than 50 degrees F) for a period of 24 hours before installation, during installation and during curing time. Concrete to receive surfacing shall have been cured for at least 28 days and shall have been free of water for at least seven days. Wood substrates shall have a measured moisture content of no more than between 8% - 10% prior to application.

1.4 Protection

Protect adjacent surfaces not scheduled to receive Quarry-Tek flooring by masking or covering. Protect installed and cured areas by covering with 30 lb building paper or other equally effective means until final acceptance of the project.

NOTE: At no time during the life of this floor should "Red Rosin Paper" be used for floor protection. Flooring industry testing claims that the dye from this paper can leech into the floor under certain conditions, i.e. moisture, humidity, exposure to water, etc. and cause staining. A stain from Red Rosin Paper may be permanent depending on the severity and XF will ***NOT*** cover claims associated with this problem.

2.0 MATERIALS

2.1 Epoxy Floor Covering

2.1.1 **Epoxy**—should be approved and be 100% solids, non-toxic, containing no solvents or thinners. No priming is necessary since product is self-priming in itself.

2.1.2 **Aggregate**—select the desired color patterns consisting of marble, quartz or granite.

2.1.3 **Topcoating** – if desired, a topcoat consisting of an approved epoxy can be installed as a clear coating.

2.1.4 Physical Properties

2.1.4.1	Compressive Strength	14,600 psi @ ASTM D695
2.1.4.2	Tensile Strength	9,000 psi @ ASTM D638
2.1.4.3	Flexural Strength	15,300 psi @ ASTM D790
2.1.4.4	Adhesion Strength	360 psi @ elcometer (concrete failure)
2.1.4.5	Thermal Coefficient of Expansion	30C
2.1.4.6	Flame Spread	MIL-D-24613, MIL-STD-1623 ASTM-D 635<3
2.1.4.7	Abrasion Resistant	MIL-D-14613, MIL-STD-1623 30 mg.
2.1.4.8	Impact Resistant	MIL-D-24613 No cracking or delaminating
2.1.4.9	Odor	ASTM 2794 Free of objectionable odors
2.1.4.10	Weight	ASTM 2794 Not to exceed 1.1 lbs @3/16" thick.
2.1.4.11	Water Absorption	ASTM D 413 < 0.2%
2.1.4.12	Chemical Resistance	

<u>Reagent</u>	<u>Rating</u>
Butanol	D
Xylene	C
1,1,1, trichlorethane	B
MEK	A
Methanol	A
Ethyl alcohol	C
Skydrol	B
10% sodium hydroxide	E
50% SODIUM HYDROXIDE	E
10% sulfuric acid	C
70% sulfuric acid	A
10% HCl (aq)	C
5% acetic acid	B
Methylene Chloride	A
Acetone	B

Rating Key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E – long term immersion.

NOTE: extensive chemical resistance information is available through your sales associate.

3.0 SURFACE PREPARATION

NOTE: Quarry-Tek floor systems should not be installed over loose resilient tile or sheet flooring. If existing concrete substrates are badly cracked or deeply contaminated with oil or fat, a new concrete topping of proper thickness and strength should be shown and specified in this section. Wood floors that are poorly supported, badly worn, splintered, or grease/oil soaked should be renovated prior to application of resinous flooring.

- 3.1 Completely remove all dirt, dust, debris, wax, paint, latent, grease, oil, fats, etc. and loose particles by sanding, sandblasting, chipping, bush hammering, wire brushing, high pressure water blasting. Substrate should then be swept or rinsed, dry mopped and allowed to dry.
Wood surfaces should be sanded to remove all latent contaminants, then swept or vacuumed. Joints should be taped with 4 inch wide glass fiber reinforced tape.
- 3.2 Remove any loose areas of substrate, chip out swollen or cracked areas then fill cracks, spalls, joints, or other depressions with an epoxy underlayment as recommended by the manufacturer compatible with the floor surfacing material.

4.0 INSTALLATION

Note: Mixing and application of the flooring material, underlayment, and any desired topcoat should be done in strict compliance of the manufacturer's Directions for Application.

- 4.1 Mix liquids "A" (resin) and "B" (hardener) together in proper mixing vessel for one minute to thoroughly mix epoxy. After epoxy is properly mixed, add the aggregate and mix all three ingredients for approximately 1 ½ minutes to properly wet out aggregate. Mixing device should be slow speed bucket mixer or ¾" drill.
- 4.2 Apply mixed material directly to surface to be covered by use of a hand trowel. Immediately smooth mixture to a thickness of 3/16"-1/4". Wait approximately 30 seconds for all material to settle out, then use a flat trowel to level the surface.
NOTE: This method produces a flat and level surface. Maintain room temperatures above 60 degrees for proper curing.
- 4.3 If topcoat is desired, contact Xpress Flooring for the manufacturer's approved topcoat.
- 4.4 Allow the newly troweled floor to cure for a minimum of 8 hours. After the initial 8 hours, restrict use of the floor to light foot traffic for a minimum of 24 hours.
- 4.5 COVE BASE INSTALLATION – Install zinc terrazzo strips with hot glue to hold in place to desired height.
- 4.6 Mix liquids "A" (resin) and "B" (hardener) together for approximately 30 seconds. Pour 1 1/2 - 2 gallons, by volume, of thixotropic dry powder (cab-o-sil) into already mixed resin and hardener. This will produce a creamy mixture. Add dry marble aggregate to this creamy mixture and blend for one minute.
- 4.7 Begin installing base material with gauge or margin trowel to desired height. (Standard cove base is 4" high.)
- 4.8 Leave a small amount of base material at bottom of cove in order to make radius cove base.
- 4.9 Once material is applied to surface, use 4" or 6" cove trowel to smooth the base material on the wall. NOTE: Use denatured alcohol to clean excess material off the cove trowel.