SeamTek® Epoxy Glasswall-FR

Part 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplemental Conditions and Division 1 Specification sections apply to work of this Section.

1.02 WORK INCLUDED

A. Provide materials, labor and equipment required to prepare designated wall area and install wall system as shown on the drawings.
B. Related Work:
   1. Section 03300: Concrete Work, for concrete substrate.
   2. Section : Plumbing, drains.
   3. Section 07000: Sealants, silicone sanitary and USDA sealants.

1.03 QUALITY ASSURANCE

A. Manufacturer: Obtain all wall system materials required for this Section from a single manufacture.
B. Contractor: Shall have a minimum of 10 years experience in the installation of seamless walls. Shall be Approved Installer of Manufacturer specified.

1.04 SUBMITTALS

A. Manufacturer's data for wall system, including the following:
   1. Physical Properties
   2. Performance Properties
   3. Specified Tests
   4. Material Safety Data Sheets
B. Manufacturer's standard single source warranty in accordance with Section 1.05 WARRANTY.
C. Contractor Experience: Select a contractor with a minimum of 5 years experience installing the specified system and with written certification from the Manufacturer.
D. Manufacturer's standard color charts for color selection.
E. Three 12" X 12" system samples for purposes of chemical resistance testing and finish texture approval.

1.05 WARRANTY

A. Furnish manufacturer's written warranty on seamless walls, for period of two years after installation., warranting against loss of bond and wear through to concrete substrate (through normal wear and use). Warrant shall be single source from the manufacturer, including material and labor.

1.06 DELIVERY, HANDLING AND STORAGE

A. Deliver materials in manufacturer's unopened, undamaged containers, clearly marked with the following:
   1. Product Name
   2. Manufacturer's Name
   3. Resin or Hardener Designation
   4. Mix Ratio of Resin and Hardener
B. Handle materials in a safe and proper manner to avoid damage or spills.
C. Inspect direct job site deliveries to verify correct material and quantities are received in good condition.
D. Replace, at no cost to the owner, materials that are found to be defective in manufacturing or damaged in transit, handling or storage.
E. Store materials per manufacturer's instructions and as follows:
   1. Seals and labels shall be intact and legible.
   2. Temperature of storage area shall be maintained between 60^{O}F and 85^{O}F.
   3. Do not use materials which have been stored for a longer period of time than the manufacturer's maximum recommended shelf life.

1.07 JOB SITE CONDITIONS

A. Pre-Installation conference shall be required with General Contractor, Owners Representative, Seamless Contractor and/or Manufacturer's Representative to review the following:
   1. Evaluate substrate conditions and extent of repairs necessary for Contractor to begin normal preparation and installation of seamless wall finishes.
   2. Evaluate detail conditions at all penetrations, terminations and perimeter locations. Detail problems should be documented and resolved prior to wall installation.
   3. Test concrete substrates to verify that substrate moisture content does not exceed that recommended by wall system manufacture.
   4. Review job site conditions, including temperature, power, and lighting, necessary for a successful installation.
B. Protect surrounding substrate and surfaces, as well as in place equipment, from damage during surface preparation and system installation.
C. Job area shall be free of other trades during wall installation, and for a period of 48 hours upon completion.
D. General Contractor shall provide adequate ventilation by use of fans or other devices.
E. General Contractor shall maintain lighting at a minimum uniform level equivalent to the end use conditions in the areas where the seamless wall system is being installed. If possible, schedule installation so that permanent lighting will be operational during installation.
F. General contractor shall ensure that leaks from pipes and other sources are corrected prior to wall installation.
G. General Contractor shall provide minimum substrate temperatures of 65 degrees F and atmospheric temperature of 70 degrees F with relative humidity below 85% during wall installation and until final acceptance.

1.08 CURING, CLEAN UP AND PROTECTION

A. Cure final wall system in accordance with manufacturer's recommendations. Cure time shall be a minimum of 48 hours prior to traffic and 7 days before exposure to chemicals.
B. Clean up work area, removing all equipment, materials and trash.
C. General contractor shall provide temporary protection from construction traffic and other trades prior to final acceptance by the owner.

Part 2 - Products

2.01 Materials

A. Wall System Overview
The wall system specified shall be SeamTek® GlassWall FR by Life Science Products, inc. This system is a high build epoxy wall system including 5.6 oz. fiberglass mat applied in a minimum thickness of 30 mls Dry Film Thickness (DFT). The system shall be pinhole free. Use 100% solids epoxy resins, no solvent containing materials will be allowed. When applying over CMU or poured concrete walls extra steps must be taken to parge or otherwise make the substrate smooth and suitable for fiberglass.

Epoxy Physical Properties For GlassWall Reinforced		
Hardness Shore D	ASTM D-1706	70 - 80
Tensile Strength	ASTM D-638	3,000 psi min.
Flexural Strength	ASTM D-790	4,000 psi min.
Thermal Shock	Mil F-52505	No cracking or loss of adhesion
Abrasion Resistance (Taber Abrader, CS-17 Wheels, 1000 gm. load, 1000 cycles)	ASTM D-4060	.035 gm loss
Ultimate Elongation	ASTM D-638	20% min.
Chemical Resistance	20% Acetic Acid	Occasional Spill
	50% Citric Acid	Good
	20% Nitric Acid	Occasional Spill
	30% Hydrochloric Acid	Occasional Spill
	10% Hydrofluoric Acid	Occasional Spill
	Hydrogen Peroxide	Good
	40% Potassium Hydroxide	Good
	40% Sodium Hydroxide	Good
	50% Sulfuric Acid	Good
	Urea	Good

Part 3 - Execution

3.01 Surface Preparation

A. All surfaces to receive Glasswall Reinforced Wall System must be smooth and without surface imperfections prior to beginning the system installations. Unfilled holes, joints and cracks will result in air pockets and potential pinholes in the system.
B. Existing drywall surfaces shall be sanded and wiped clean prior to installation of glass wall system. New drywall joints shall be taped and prepared to receive system. In short, new construction shall be paint ready.
C. New CMU walls shall be filled with suitable filler or parged to form a smooth surface free of grout lines. Do not proceed with the Reinforced system until all imperfections are filled.
D. Existing painted CMU shall be mechanically abraded to assuire a good mechanical bond, then proceed as per “C” above.
E. New poured concrete vertical surfaces shall be free of bug holes and the corrective measures to fix bug holes is not part of this specification.

3.02 APPLICATION

A. Apply each component of wall system per manufacturer’s installation instructions, including mixing and application. Apply wall system directly over non-expansion joints and cracks which have been treated with semi-rigid epoxy. Terminate system at edge of expansion joints, as designated by Design Professional.
B. Cure resinous wall system materials in compliance with manufacturer’s directions.

3.03 CLEANING AND PROTECTION

A. Cleaning: Remove all debris resulting from the wall installation during the progress of the work.
B. Protection: General contractor shall provide protection from other trades prior to final acceptance by owner.