

Architectural Specification for Glass Fusion™ Section 096100

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

1.2 SUMMARY

A. Section Includes: Furnishing of all labor, materials, services and equipment necessary for the supply and installation of a crystalline sealant to concrete masonry or tile substrates, above-grade on the dry side of substrates, as indicated on drawings and as specified herein.

1. Related Sections:

- a. Section 031000 - Concrete Work
- b. Section 093019 - Masonry Pavers
- c. Section 099000 - Paints and Coatings

1.3 REFERENCES

Applicable Standards: The following standards are referenced herein.

1. American Society for Testing and Materials (ASTM)

1.4 SYSTEM DESCRIPTION

A. Glass Fusion™ is a silica based protective sealer that provides a glass-like film over masonry and tile and grout surfaces. Glass Fusion is applied in liquid form at room temperature. Glass fusion protects against wear, mold, staining, efflorescence, water penetration. This process causes concrete, bricks and mortar to become permanently sealed against the penetration of liquids as it reverses the capillary action of the substrate.

B. Glass Fusion™ is applied as a protective barrier to the exterior of concrete, masonry, and tile and grout.

1.5 SYSTEM PERFORMANCE REQUIREMENTS

A. : Testing Requirements: Glass Fusion™ shall be tested in accordance with the

following standards and conditions, and the testing results shall meet or exceed the performance requirements as specified herein.

1. Independent Laboratory: Testing shall be performed by an independent laboratory meeting the requirements of ASTM C1027 ("Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile" and certified by the United States Bureau of Standards. Testing laboratory shall obtain all tile samples.
2. Independent Laboratory: Testing shall be performed by an independent laboratory meeting the requirements of ASTM C1028 ("Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method " and certified by the United States Bureau of Standards. Testing laboratory shall obtain all tile samples.
3. Independent Laboratory: Testing shall be performed by an independent laboratory meeting the requirements of Mohs' Scratch Hardness and certified by the United States Bureau of Standards. Testing laboratory shall obtain all tile samples.

1.6 SUBMITTALS:

1. Product Technical Data Sheet
2. Material Safety Data Sheet
3. Samples. Provide three 6-inch square sample of Glass Fusion installed over new or existing substrate as defined in.
4. Test Reports: Submit for acceptance, complete test reports from approved independent testing laboratories certifying that coating system conforms to performance characteristics and testing requirements specified herein.
5. Manufacturer's Certification: Provide certificates signed by manufacturer or manufacturer's representative certifying that the materials to be installed comply in all respects with the requirements of

this specification, and that the applicator is qualified and approved to install the materials in accordance with manufacturer's product data.

6. Manufacturer's Field Report: Provide copy of report from manufacturer's representative confirming that the surfaces to which waterproofing material is to be applied are in a condition suitable to receive same.

1.7 QUALITY ASSURANCE

- A. Manufacturer: Provide products of manufacturer with no less than 4 years experience in manufacturing the silica sealant materials for the required work. Manufacturers that cannot provide the performance test data specified herein will not be considered for the project.
- B. Applicator: Floor Coating applicator shall be experienced in the installation of Glass Fusion silica sealant materials as demonstrated by previous successful installations, and shall be approved by the manufacturer in writing.
- C. Pre-Installation Conference: Prior to installation of waterproofing, conduct meeting with waterproofing applicator, installers of work adjacent to or which penetrates waterproofing, Architect/Engineer, owner's representative, and waterproofing manufacturer's representative to verify and review the following:
 1. Project requirements for waterproofing as set out in Contract Document.
 2. Manufacturer's product data including application instructions.
 3. Substrate conditions, and procedures for substrate preparation and waterproofing installation.
- D. Technical Consultation: The coating manufacturer's representative shall

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provide technical consultation on waterproofing application.

E. Compliance:

Comply with manufacturer's product data regarding condition of substrate to receive coating, weather conditions before and during installation, and protection of the installed coating system.

1.8 WARRANTY

A. Manufacturer's Warranty:

Manufacturer shall provide standard product warranty executed by authorized company official. Term of warranty shall be 3 years from Date of Substantial Completion.

B. Applicator's Warranty: Applicator shall warrant the coating installation against defects caused by faulty workmanship or materials for a period of 3 years from Date of Substantial Completion. The warranty will cover the surfaces treated and will bind the applicator to repair, at his expense, any and all failures of the treated surfaces which are not due to structural weaknesses or other causes beyond applicator's control such as fire, earthquake, tornado and hurricane.

The warranty shall read as follows:

1. Warranty: The applicator warrants that, upon completion of the work, surfaces treated with silica coating will be and will remain free from failure resulting from defective workmanship or materials for a period of 3 years from Date of Substantial Completion. In the event that failure occurs within the warranty period from such causes, the applicator shall, at his sole expense, repair, replace or otherwise correct such defective workmanship or materials. Applicator shall not be liable for consequential damages and applicator's liability shall be limited to repair, replacement or correcting of defective workmanship or materials. Applicator

shall have no responsibility with respect to failure or other defects caused by structural failure or movement of the structure, or any other causes beyond Applicator's control.

PART 2 - PRODUCTS

2.1 PROTECTIVE FLOOR SEALANT COATING

A. Proprietary Products: Glass Fusion™ silica coating materials as follows:

1. GlassFusion International, MG Distribution Inc., Glass Fusion™
 - a. Glass Fusion™ TG100 (tile & grout)
 - b. Glass Fusion™ GF100 (grout)
 - c. Glass Fusion™ NS100 (natural stones)
 - d. Glass Fusion™ AG100 (anti graffiti)
 - e. Glass Fusion™ BR100 (brick & paver)
 - f. Glass Fusion™ CC100 (concrete)
 - g. Glass Fusion™ PS100 (painted & stain concrete)

2. Substitutions: No substitutions permitted.

3. Source Quality: Obtain proprietary Glass Fusion™ products from the single manufacturer.

B. Protective Floor Coating :

ASTM C-1027, ASTM C-1028, Installation: 1.1 to 1.9 mil wet film thickness yielding a 0.3 to 0.6 mil dry film thickness

C. Wearing Surface: smooth

D. Slip Resistance: Per ASTM C1028, average slip resistance of twelve pulls

1) Dry .99

2) Wet 1.3

Abrasion Resistance: Per ASTM C-1027, # of revolutions

1) Uncoated 2100

2) Coated 6000

Mohs' Scratch Hardness 6 (The Mohs' Scratch Hardness Scale runs from 1- Talc to 10- Diamond)

2.2 MIXES

A. Coverage: Proportions (by Volume) for example

1. 250 square feet per gallon (Brick, Paver and Concrete)

2. 700 to 1,000 square feet per gallon (tile & Grout and Painted Concrete)

2.3 INSTALLATION ACCESSORIES

A. Cleaning Compounds: Provided or approved by flooring manufacturer for applications indicated.

1. High Ph Degreaser

2. Neutralizing Acid- Phosphoric

3. Peroxide- rinse-less agent

4. IPA- Isopropyl Alcohol

B. Protective Masking Barrier:

1. Plastic, Paper and or Tape

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Visit: Prior to Glass Fusion™ installation, arrange visit to project site with coating manufacturer's representative. Representative shall inspect and certify that surfaces are in acceptable condition to receive treatment.

B. Verification of Substrates: Verify that surfaces are sound and clean, and that form release agents, dirt, dust and debris and other materials are removed.

C. Examination for Defects: Examine surfaces to be waterproofed for form tie holes and structural defects such as honeycombing, rock pockets, faulty construction joints and cracks. Such defects to be repaired in accordance to manufacturer's product data and 3.02 below.

3.2 PREPARATION

A. Remove fixtures and similar items that are not to be coated. Mask items that cannot be removed. Reinstall items in each area after coating is complete.

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B. Surface Preparation: Clean and prepare substrates according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners. Prepare all surfaces in an area before beginning coating in that area. Schedule coating so cleaning operations will not damage newly coated surfaces.

3.3 APPLICATION

A. Apply coatings by brush, roller, spray or other applicators according to coating manufacturer's written instructions. Use brushes or rollers only for exterior coating and where the use of other applicators is not practical.

B. Maintain uniformity of floor coating, and install continuously until reaching a point where the wet edge is at the edge of the application area

C. Transparent (Clear) Finish: Use single coat to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, or other surface imperfections.

3.4 CURING

Drying and Cure Time at 70° F
Dry to Touch 4-6 hours
Hard Dry (foot use) 8-10 hours
Full Cure 24 hours

3.5 INTERFACE WITH OTHER MATERIALS

A. Utilized as a protective wear and chemical barrier over paints (latex, epoxy, urethane, acrylic)

3.6 PROTECTION

A. Do not allow foot traffic for 10 hours.
B. Do not clean for 24 hours.

3.7 CLEANING

A. Concrete, Bricks and Pavers- Pressure washer held a minimum of 24 inches from surface. Extract water if necessary. Dry with floor fans.

B. Tile and Grout- Neutral, rinse-less cleaning solution.

agitate with soft bristle brush, extract, rinse extract, dry with floor fans.

3.8 MAINTENANCE- NA

END OF SECTION 096100



voice: 855-85-GLASS
fax: 866-288-6958