

# STONTEC XPRESS GUIDE SPEC

**SECTION 096723 - RESINOUS FLOORING**

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1. **GENERAL**
   * + 1. RELATED DOCUMENTS
          1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
       2. SUMMARY
          1. This Section includes one resinous flooring system, one with (MMA) methyl methacrylate body.

Application Method: Squeegee, screed, and broadcast.

* + - 1. SUBMITTALS
         1. Product Data: For each type of product indicated. Include manufacturer's technical data, application instructions, and recommendations for each resinous flooring component required.
         2. Samples for Verification: For each resinous flooring system required, 5 inches (150 mm) square, applied to a rigid backing.
         3. Product Schedule: Use resinous flooring designations indicated in Part 2 and room designations indicated on Drawings in product schedule.
         4. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.
         5. Maintenance Data: For resinous flooring to include in maintenance manuals.
      2. QUALITY ASSURANCE
         1. No request for substitution shall be considered that would change the generic type of floor system specified (i.e. MMA, methyl methacrylate based flake broadcast with mortar coat). Equivalent materials of other manufactures may be substituted only on approval of Architect or Engineer. Request for substitution will only be considered only if submitted 10 days prior to bid date. Request will be subject to specification requirements described in this section.
         2. Installer Qualifications: Engage an experienced installer (applicator) who is experienced in applying resinous flooring systems similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to resinous flooring manufacturer.

Engage an installer who is certified in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.

Contractor shall have completed at least 10 projects of similar size and complexity.

* + - * 1. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, through one source from a single manufacturer, with not less than ten years of successful experience in manufacturing and installing principal materials described in this section. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.
        2. Manufacturer Field Technical Service Representatives: Resinous flooring manufacture shall retain the services of Field Technical Service Representatives who are trained specifically on installing the system to be used on the project.

Field Technical Services Representatives shall be employed by the system manufacture to assist in the quality assurance and quality control process of the installation and shall be available to perform field problem solving issues with the installer.

* + - * 1. Mockups: Apply mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

Apply full-thickness mockups on 48-inch- (1200-mm-) square floor area selected by Architect.

Include 48-inch (1200-mm) length of integral cove base.

Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - * 1. Pre-installation Conference:

General contractor shall arrange a meeting not less than thirty days prior to starting work.

Attendance:

General Contractor

Architect/Owner's Representative.

Manufacturer/Installer's Representative.

* + - 1. DELIVERY, STORAGE, AND HANDLING
         1. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.
         2. Store materials to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects. Store material per product data sheet.
      2. PROJECT CONDITIONS
         1. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.

Maintain material and substrate temperature between 60 and 77 deg F (16 and 25 ˚C) during resinous flooring application and for not less than 24 hours after application.

* + - * 1. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.
        2. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application, unless manufacturer recommends a longer period.
        3. Concrete substrate shall be properly cured. A vapor barrier must be present for concrete subfloors on or below grade. Otherwise, an osmotic pressure resistant grout must be installed prior to the resinous flooring

1.7 WARRANTY

* + - * 1. Manufacturer shall furnish a single, written warranty covering both material and workmanship for a period of (1) full years from date of installation, or provide a joint and several warranty signed on a single document by material manufacturer and applicator jointly and severally warranting the materials and workmanship for a period of (1) full year from date of installation. A sample warranty letter must be included with bid package or bid may be disqualified.

1. **PRODUCTS**
   * + 1. RESINOUS FLOORING

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products.

* + - * 1. Available Products: Subject to compliance with requirements.

Confirm inclusion of 25mil body coat, and broadcast quartz into primer increasing bond strength. Products that may be incorporated into the work include,

* + - * 1. Products: Subject to compliance with requirements:

Stonhard, Inc.; Stontec Xpress ®. Basis of Design.

* + - * 1. System Characteristics:

Color and Pattern: Select from manufactures standards

Wearing Surface: Standard

Integral Cove Base: TBD

Overall System Thickness: 1/8”, 3mm.

* + - * 1. System Components: Manufacturer's standard components that are compatible with each other and as follows:

Primer:

Material Basis: Stontec Xpress Primer

Resin: Methyl methacrylate.

Formulation Description: (2) two component, low viscosity.

Application Method: Squeegee and roller.

Number of Coats: (1) one.

Aggregates: Broadcast quartz into wet primer coat.

Body Coat(s):

Material Basis: Stontec Xpress Undercoat.

Resin: Methyl methacrylate.

Formulation Description: (3) three component, medium viscosity.

Application Method: Notched squeegee.

Thickness of Coats: 2mm with standard primer coat

Number of Coats: (1) One.

Broadcast:

Material Basis: Stontec Flakes

Formulation Description: Decorative flake (1/16” or ¼)

Type: Tweed (chips to be mixed in Mfg. facility)

Finish: Broadcast to rejection.

Number of Coats: one.

Topcoat:

Material Basis: Stontec Xpress Sealer

Resin: Methyl methacrylate.

Formulation Description: (2) component, UV stable.

Type: Clear.

Finish: Gloss. (see finish schedule for texture options)

Number of Coats: one.

Note: Components listed above are the basis of design intent; all bids will be compared to this standard including resin chemistry, color, wearing surface, thickness, and installation procedures, including number of coats. Contractor shall be required to comply with all the requirements of the Specifications and all of the components required by the Specifications, whether or not such products are specifically listed above.

* + - 1. ACCESSORY MATERIALS
         1. Patching, Leveling and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated. No Single component or cementitious materials.
         2. Joint Sealant: Type recommended or produced by resinous flooring manufacturer for type of service and joint condition indicated.
         3. System Physical Properties: Provide resinous flooring system with the following minimum physical property requirements when tested according to test methods indicated:

Tensile Strength: 5,900 psi per ASTM D-638

Flexural Modulus of Elasticity: 0.9 x 10^6 psi per ASTM D-790

Hardness: .80 per ASTM D-2240, Shore D

Linear Coefficient of Thermal Expansion: 33 x 10^-6 in./in. ̊F per ASTM C-531

1. **EXECUTION**
   * + 1. PREPARATION
          1. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean and dry substrate for resinous flooring application.
          2. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.

Mechanically prepare substrates as follows:

Mechanically prepare with the use of Diamond grinding equipment to provide surface sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring. Or,

Shot-blast surfaces with an apparatus that abrades the concrete surface, contains the dispensed shot within the apparatus, and recirculates the shot by vacuum pickup or Diamond Grind with a dust free system.

Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.

Verify that concrete substrates meet the following requirements.

Perform in situ probe test, ASTM F 2170. Proceed with application only after substrates do not exceed a maximum potential equilibrium relative humidity of 80 percent.

Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. of slab in 24 hours.

* + - * 1. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.
        2. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations. Allowances should be included for Stonflex MP7 joint fill material.
      1. APPLICATION
         1. General: Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.

Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.

Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.

At substrate expansion and isolation joints, provide joint in resinous flooring to comply with resinous flooring manufacturer's written recommendations.

Apply joint sealant to comply with manufacturer's written recommendations.

* + - * 1. Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates
        2. Broadcast: Immediately broadcast quartz silica aggregate into the primer using manufacturer's specially designed spray caster. Strict adherence to manufacturer's installation procedures and coverage rates is imperative.
        3. Integral Cove Base: Apply cove base mix to wall surfaces before applying flooring. Apply according to manufacturer's written instructions and details including those for taping, mixing, priming, troweling, sanding, and top coating of cove base. Round internal and external corners. Refer to detail drawings.
        4. Body coat: Mix base material according to manufacturer's recommended procedures. Uniformly spread mixed material over previously primed substrate using manufacturer's installation tool. Roll material with strict adherence to manufacturer's installation procedures and coverage rates.
        5. Broadcast: Immediately broadcast decorative flakes into the body coat. Strict adherence to manufacturer's installation procedures and coverage rates is imperative.
        6. First Sealer: Remove excess un-bonded flakes by lightly brushing and vacuuming the floor surface. Mix and apply sealer with strict adherence to manufacturer's installation procedures.
        7. Second sealer: Lightly sand first sealer coat. Mix and apply second sealer coat with strict adherence to manufacturer's installation procedures.

1. Retain paragraph below if waterproofing membrane is required. Waterproofing membranes may not require a primer; verify requirements for resinous flooring systems selected.
   * + 1. TERMINATIONS
          1. Chase edges to “lock” the coating system into the concrete substrate along lines of termination.
          2. Penetration Treatment: Lap and seal coating onto the perimeter of the penetrating item by bridging over compatible elastomer at the interface to compensate for possible movement.
          3. Trenches: Continue coating system into trenches to maintain monolithic protection. Treat cold joints to assure bridging of potential cracks.
          4. Treat floor drains by chasing the coating to lock in place at point of termination.
       2. JOINTS AND CRACKS
          1. Treat control joints to maintain monolithic protection.
          2. Treat cold joints and construction joints to bridge potential cracks and to maintain monolithic protection on horizontal and vertical surfaces as well as horizontal and vertical interfaces.
          3. Vertical and horizontal contraction and expansion joints are treated by installing backer rod and compatible sealant after coating installation is completed. Provide sealant type recommended by manufacturer for traffic conditions and chemical exposures to be encountered.
       3. FIELD QUALITY CONTROL
          1. Material Sampling: Owner may at any time and any numbers of times during resinous flooring application require material samples for testing for compliance with requirements.

Owner will engage an independent testing agency to take samples of materials being used. Material samples will be taken, identified, sealed, and certified in presence of Contractor.

Testing agency will test samples for compliance with requirements, using applicable referenced testing procedures or, if not referenced, using testing procedures listed in manufacturer's product data.

If test results show applied materials do not comply with specified requirements, pay for testing, remove noncomplying materials, prepare surfaces coated with unacceptable materials, and reapply flooring materials to comply with requirements.

* + - 1. CLEANING, PROTECTING, AND CURING
         1. Cure resinous flooring materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process. Close area of application for a minimum of 24 hours.
         2. Protect resinous flooring materials from damage and wear during construction operation. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application. General Contractor is responsible for protection.
         3. Cleaning: Remove temporary covering and clean resinous flooring just prior to final inspection. Use cleaning materials and procedures recommended by resinous flooring manufacturer. General Contractor is responsible for cleaning prior to inspection.

END OF SECTION 096723