**ARCHITECTURAL GUIDE SPECIFICATION**

**096713 – Fluid-Applied Flooring/Elastomeric Liquid Flooring**

**KEY LASTIC ME2 - MECHANICAL EQUIPMENT ROOM FLOORING SYSTEM**

*Note to Specifier: This guide specification has comments or notes that require editing. Please consult with Key Resin to confirm which options or notes may be necessary for your specific project.*

##  GENERAL

## SUMMARY

## Section Includes:

## Fluid-applied polymer interior waterproofing flooring

## Coved seamless wall base

## Accessories necessary for complete installation.

## SUBMITTALS

* + 1. Samples: Submit a minimum of three standard size cured samples of flooring system indicating color and non-skid properties. Approved samples will be used during installation for product match.
		2. Manufacturers Application Instructions: Submit descriptive data and specific recommendations for mixing, application, curing including any precautions of special handling instructions required to comply with the Occupational Safety and Health Act.
		3. Shop Drawings: Shop Drawings shall be furnished showing installation of cove base, termination details and details at floor material transitions and where adjoining equipment.
		4. Maintenance Instructions: Submit current copies of the flooring manufacturer's printed recommendations on maintenance methods and products. Submit in accordance with *Section 01730 - Operation and Maintenance Manuals*.

## QUALITY ASSURANCE

* + 1. Materials used in the floor surfacing shall be the products of a single manufacturer.
		2. Installation shall be performed by an applicator with minimum 3 years’ experience in work of similar nature and scope. Installer must be approved by the manufacturer of the floor surfacing materials. The general contractor shall furnish a written statement from the manufacturer that the installer is acceptable.
		3. Installer to verify locations of all joints required by the provisions of this Section and *Section 3300 Cast-In-Place-Concrete* and by the recommendations of the related material manufacturers.
			1. Joint locations may or may not be shown in drawings.
			2. Refer to drawings required under submittals above.
		4. Installer to keep daily log of the date of installation, room number, type, color, and method of application of product being installed. Log must be available for inspection by the Architect upon request.
		5. Installer must have proven experience or training approved by flooring system manufacturer with specified system.
		6. Portable mock-up: Prior to starting application of flooring, provide full scale portable mock-up to establish acceptable quality, durability, and appearance. Mock-up size must not be less than 4 square feet.
			1. Acceptable mock-up to be standard of quality for installed work.
			2. Unacceptable installed work to be removed and replaced until acceptable. Aesthetically unacceptable but well bonded work may be overlaid or recoated if thickness clearances permit.

## PROJECT CONDITIONS

* + 1. Maintain the ambient room and the floor temperatures at 50 degrees Fahrenheit, or above, for a period extending from 72 hours before, during and after floor installation. Concrete to receive surfacing shall have cured for at least 28 days and shall have been free of water for at least 7 days.
		2. Advise other trades of fixtures and fittings not to be installed until flooring is cured and protected.

## PROTECTION

* + 1. Protect adjacent surfaces not scheduled to receive the flooring by masking, or by other means, to maintain these surfaces free of the flooring material.
		2. Provide adequate ventilation and fire protection at all mixing and placing operations. Prohibit smoking or use of spark or flame producing devices within 50 feet of any mixing or placing operation.

## PRODUCT DELIVERY, STORAGE, AND HANDLING

* + 1. All materials shall be delivered to project site in original manufacturer's sealed containers including type of material, batch numbers, date of manufacture, and pertinent labels intact and legible.
		2. Store materials in dry protected area at a temperature between 50° F to 80° F.
		3. Follow all manufacturer's specific instructions and prudent safety practices for storage and handling.

## WARRANTY

* + 1. Contractor to guarantee work under this Section to be free from defects of material and installation for the duration of the warranty period. Defects occurring during warranty period shall be repaired, in a manner satisfactory to the Owner and the Architect, at no additional cost to the Owner.
			1. Warranty Period: One (1) Year.

#  PRODUCTS

## MANUFACTURERS

* + 1. Specifications and quality of design standard (basis of design) based on Key Resin Company: Key Lastic ME2 Mechanical Equipment Room Flooring System.

Key Resin Company: 888-943-4532, [www.keyresin.com](http://www.keyresin.com)

* + 1. System description: The fluid applied, resilient flooring system is composed of 100% solids epoxies and blended aggregates.
		2. Alternative manufacturers must have as a minimum the standards set forth in this specification and must be preapproved in accordance with project requirements.

## MATERIALS

### **Primer:**

* + - 1. Key #502 Epoxy Primer
				1. The primer shall be a 100% solids, two component, moisture tolerant penetrating resin.

### **Elastomeric Basecoat:**

* + - 1. Key #580 Flexible Epoxy
				1. The elastomeric basecoat shall be a 100% solids, flexible epoxy
				2. Number of Coats required: 2

### **Sealer/Topcoat:**

### **Key #520 Epoxy Coating**

* + - * 1. The pigmented topcoat shall be a 100% solids pigmented epoxy coating
				2. Number of Coats required: 1
		1. Aggregates:
			1. Provide slip-resistant, cleanable textured finish. Samples to be approved by Architect or Owner.
			2. Blended quartz sand or silica sand, 30 mesh.
		2. Finish: Color as selected by Architect or Owner from the manufacturer's standard patterns and colors.
		3. Provide 4 inch integral coved base as required in the drawings.

#  EXECUTION

## PREPARATION

* + 1. Obtain Architect's approval of mock-up before installing flooring; see QUALITY ASSURANCE in **PART 1.**
		2. Preparation of Surface:
			1. Inspect surfaces to receive flooring and verify that condition is smooth and free from conditions that will adversely affect execution, permanence or quality of work.
			2. Notify Architect in writing prior to commencing work of any conditions deemed unsatisfactory for the installation; installation of flooring materials is understood as acceptance of the substrate as satisfactory.
			3. Concrete: Test for moisture content and moisture vapor emission rate; install no flooring over concrete until the concrete has been cured and is sufficiently dry to achieve permanence with flooring as determined by material manufacturer's recommended bond and moisture tests.
				1. Testing must be done to verify that the moisture vapor emission rate of the slab does not exceed that as recommended by the manufacturer at time of installation of the flooring or at any future date. Moisture vapor emission and moisture content testing must conform with the requirements of ASTM F-1869-11 (Calcium Chloride Test) and ASTM F-2170-11 (Relative Humidity Probe Test). If test results show excessive levels of moisture content or vapor emission rate, apply manufacturer’s recommended moisture vapor emission control material based upon the highest individual reading.
				2. Effectively remove concrete laitance by mechanical shot blasting. Surface profile must be a minimum CSP-3 to CSP-4 profile according to International Concrete Repair Institute Guideline #03732. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.
				3. Treat cracks and non-expansion joints in concrete using manufacturer's recommended practice. Rout out crack/joint and fill with epoxy; reinforce with fiberglass cloth in accordance with manufacturer's recommendation to reduce cracking through flooring system.

Fill all substrate cracks 1/16in or larger with Key 580 flexible epoxy membrane and install the 580 membrane as a band-aid system, 10-12 inches on each side of the crack, at a minimum 30 mils thickness. Install fiberglass scrim cloth directly over the membrane. Do not embed the fiberglass cloth into the membrane.

* + - * 1. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum ¼ inch key cut shall be made to properly seat the system, providing a smooth transition between areas. This detail cut shall also apply to drain perimeters and expansion joint edges.

## INSTALLATION

* + 1. Install all floor materials in strict conformance with manufacturer's instructions.
		2. Integral Cove Base: Provide integral cove base from flooring up the coved backing. Provide cove base cap strip at top of base as recommended by flooring manufacturer and trowel material up wall to form smooth, integral transition and base 4 inches high unless otherwise indicated or scheduled. Embed fiberglass scrim into the epoxy as required when backing is not rigid concrete.
		3. Prime entire surface with specified primer per manufacturer’s installation instructions.
		4. Place elastomeric membrane in two coats to achieve a minimum dry film thickness of 36 mils. Allow first coat to cure tack free before applying second coat. Broadcast aggregate into the second coat at a rate necessary to achieve the desired non-skid texture. Allow to cure fully.
		5. Sweep excess sand and vacuum. Apply epoxy topcoat to provide a uniform, sealed surface. Allow the sealer coat to cure.
		6. Match finished work to approved sample; uniform in thickness, color, texture and free from defects detrimental to appearance.
		7. Apply temporary protection until work in area is completed. The General Contractor shall protect the finished floor from the time that the sub-contractor completes the work.

## END OF SECTION