**ARCHITECTURAL GUIDE SPECIFICATION**

Section 97730 **-** SANITARY WALL FINISH SYSTEM

# KEY HIGH-BUILD EPOXY/URETHANE WALL FINISH SYSTEM 20-30 Mils

***Note to specifier:*** *This guide specification has several sections that may require editing to conform with the requirements of your project. Please review this specification and consult with Key Resin to confirm which options may be necessary for your specific project.*

# **PART 1 - GENERAL**

## 1.01 Work included

A. Furnish all necessary materials, labor, and equipment required to install Epoxy/Urethane Wall Finish System.

## 1.02 Related work

A. All drawings and general provisions of contract including General and Special Conditions and Division I, excepting special Submittal and Quality Assurance provisions in this Section.

NOTE TO SPECIFIER: SELECT ALL THAT APPLY. DUE TO THE HIGH GLOSS, SMOOTH NATURE OF THE WALL SYSTEM IN THIS SECTION, POOR WORKMANSHIP IN THE SUBSTRATES OVER WHICH IT IS APPLIED WILL BE ACCENTUATED. THE CONTRACTOR PROVIDING EACH SUBSTRATE SHOULD BE RESPONSIBLE FOR REPAIRING IMPERFECTIONS IN THEIR WORK. YOU MAY WANT TO CONSIDER SPECIFYING SPECIAL TOLERANCES FOR THESE SUBSTRATES IN THE APPROPRIATE SECTION, AS WELL AS REQUIRING THE PRE-JOB COORDINATION CONFERENCE SUGGESTED UNDER JOB CONDITIONS.

CAST-IN PLACE CONCRETE - Section \_\_\_\_\_\_\_\_\_\_

UNIT MASONRY - Section \_\_\_\_\_\_\_\_\_\_

LATH AND PLASTER - Section \_\_\_\_\_\_\_\_\_\_

GYPSUM BOARD - Section \_\_\_\_\_\_\_\_\_\_

FLOORING - Section \_\_\_\_\_\_\_\_\_\_

## 1.03 Quality assurance

A. Manufacturer's Qualifications

1. Obtain Epoxy/Urethane Wall Finish System materials from a single manufacturer providing materials of the type specified in this section.

2. The Epoxy/Urethane Wall Finish System manufacturer shall provide detailed installation instructions to the applicator's crew.

1. Applicator Qualifications

 Installation shall be performed by a contractor with skilled mechanics having not less than three years of satisfactory experience in the application of the type of system as specified in this section and shall be approved by the manufacturer of the Epoxy/Urethane Wall Finish System.

## 1.04 Warranty

The contractor shall furnish a standard maintenance guarantee of the Epoxy/Urethane Wall Finish System for a period of one year after installation. This maintenance guarantee includes loss of bond and top-side degradation due to normal use. Not included are bubbling or loss of adhesion due to moisture penetration through the substrate, damage due to Acts of God, vandals or other elements beyond the scope of protection of this system, or claims resulting from damage due to a change in use of area in which the Epoxy/Urethane Wall Finish System is installed. Also excluded are reflective cracks from substrate. In case of a warranty claim, the owner will notify the manufacture and applicator in writing within 30 days of the first appearance of any problems which are covered under this warranty and will provide free access to the area during normal working hours. Property protection is also the owner's responsibility. Remedy is limited to direct repair of the Epoxy/Urethane Wall Finish System.

## 1.05 Submittals

A. Product Data

 Submit manufacturer's specifications on specific products of the Epoxy/Urethane Wall Finish System, including physical properties and performance properties. including all tests described in part 2.0lA in this Section and Material Safety Data Sheets. Manufacturer's standard color charts shall also be submitted and must afford the owner color selection from at least 12 standard colors. Furnish \_\_\_\_\_\_\_\_\_\_ sets of this information.

B. The applicator shall submit a 6" x 6" system sample for verification purposes and finish texture approval.

C. The applicator shall submit a copy of the manufacturer's bill of material, tagged for this specific job, along with calculations, signed by an officer of the primary material supplier demonstrating that the quantity of material furnished for the project will achieve the specified coverage and mil thicknesses.

D. It is the intention of this Section to provide the products as named. Substitutions will be considered only when received by the Design Professional through a bidding Prime Contractor at least ten days prior to the date set of receipt of bids. Upon receipt of any such submission, the Design Professional will determine whether or not the proposed product is an approved equal. In the event the Design Professional determines that a proposed system is an approved equal, he will issue an addendum and notify all bidders at least 48 hours prior to receipt of bids. No substitutions will be considered after contract bid date.

## 1.06 Material Delivery, Handling, and Storage

A. Primary system materials shall be delivered in the manufacturer's undamaged, unopened containers. Each container shall be clearly marked with the following:

1. Product name

2. Manufacturer's name

3. Component designation (A or B, etc.)

4. Ratio of component mixture

B. Provide equipment and personnel to handle the materials by methods which prevent damage.

C. The applicator shall promptly inspect all direct job-site deliveries to assure that quantities are correct and that materials comply with requirements and are not damaged.

D. The applicator shall be responsible for all materials shipped to the project jobsite.

E. Store materials in accordance with manufacturer's instructions, with seals and labels intact and legible. Maintain temperatures within the required range. 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 conditions

A. The applicator should exercise care during surface preparation and system application to protect surrounding substrates and surfaces, as well as in-place equipment. The applicator shall use his discretion as to the physical means and methods used for preparation and protection. Any costs incurred for resultant damage from negligence or inadequate protection shall be the sole responsibility of the applicator.

B. During material application, care should be exercised to comply with the temperature and humidity limitations of the materials used as defined by the manufacturer.

## PART 2 - PRODUCTS

## 2.01 Materials

A. System Overview

 The system as formulated by Key Resin Company shall be 20 - 30 mil, epoxy and urethane wall finish system using Key #544 100% Solids Epoxy Wall Coating and Key #446 Low Odor Aliphatic Urethane Sealer. This system shall be applied over a clean, prepared substrate. The system is to be applied over appropriate primer and/or block filler as recommended by Key Resin Company for each type of substrate. The finished surface shall be dense, non-porous and have a light orange peel finish.

B. Epoxy Block Filler or Polymeric Block Filler

The block filler shall be epoxy or acrylic-modified cement (polymeric), one of the following options: Key #553 Epoxy Block Filler, Key #554 Epoxy Block Filler, or Key Polymeric Block Filler as manufactured by Key Resin Company, with performance properties as outlined in the product data sheets. Latex block fillers are not acceptable.

C. Epoxy Primer

 The epoxy primer shall be Key #502 manufactured by Key Resin Company. Primer is not required if Epoxy Block Filler is to be used.

D. High Performance Epoxy Coating

 The high-performance epoxy coating shall be Key #544 Epoxy Coating as manufactured by Key Resin Company, with performance properties as outlined in the product data sheet.

E. High Performance Aliphatic Urethane Sealer

 The high-performance aliphatic urethane sealer shall be Key #446 Low Odor Urethane Sealer as manufactured by Key Resin Company, with performance properties as outlined in the product data sheet.

# **PART 3 - EXECUTION**

## 3.01 Surface Preparation

A. Prepare substrate to provide clean surface with open pores removing all contaminating or bond breaking substances including but not limited to dust, laitance, curing compounds, coatings, form release agents, sealers, oil, and grease. All spalled or deteriorated areas should be mechanically removed by chipping hammers. Level any surface projections and mortar spatters by grinding, stoning, or scraping. Rake mortar joints clean.

B. Existing tile surfaces: All ceramic and quarry tile surfaces should be sounded to determine that they are tightly bonded to the substrate. Any areas which are not soundly bonded are to be removed and patched to surrounding surface area with compatible epoxy or polyacrylate mortar as recommended and supplied by the primary system manufacturer. Care should also be taken to allow the grouted joints and setting bed to dry out prior to installing Epoxy/Urethane Wall Finish System. Tile surfaces must be ground rough.

## 3.02 Application

A. General

 Apply each component of the Epoxy/Urethane Wall Finish System in compliance with manufacturer's instructions including mixing and application methods, recoat windows, cure times and environmental restrictions.

B. Epoxy Block Filler or Polylmeric Block Filler (REQUIRED ONLY FOR CONCRETE BLOCK, TILE, OR CONCRETE IMPERFECTIONS).

 Spread thoroughly blended Key #553, Key #554, or Key Polymeric block filler over the substrate with a flat steel trowel, roller, or brush at the rate required to fill irregularities and mortar joints and create a smooth sub-surface for epoxy wall system. Multiple coats may be required to achieve proper finish. Allow proper cure time between coats and before epoxy top coats.

C. Epoxy Primer

 Prime all substrates which have not been coated with epoxy block filler at the rate of 200 - 250 square feet per gallon using Key #502 epoxy primer. Allow to cure. Dry wall substrates may require two coats of primer due to absorption.

E. Epoxy Base Coats

 Apply thoroughly mixed 100% solids Key #544 epoxy coating at the rate of 160-200 square feet per gallon to primed or filled wall to yield 8-10 dry mils. Allow to cure 12 hours. Apply one or two additional coats at 160-200 sq. ft. per gallon per coat, following recommended recoat cure time.

F. Sanding

 Sand any imperfections in the epoxy base coats such as runs and sags to achieve a smooth uniform base. Final topcoat will have a light orange peel finish and should match approved sample.

G. Urethane Sealer

 Apply thoroughly mixed low odor Key #446 urethane sealer at the rate of 300-350 square feet per gallon to yield 2 dry mils. Urethane must be applied within the Key #544 recoat window unless the epoxy has been thoroughly sanded. Allow to cure.

H. Obtain Architect’s/Owner’s approval of the system just after completion of the final coat, prior to completion of curing.

## 3.03 Curing, Cleaning, and Protection

A. Cure all Epoxy/Urethane Wall Finish System materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of the application and prior to completion of the curing process.

B. The General Contractor shall protect the finished Epoxy/Urethane Wall Finish System from the time that the sub-contractor completes the work.

## END OF SECTION