

## SECTION 03540

### RECOMMENDED SPECIFICATION FOR ARDEX SD-M DESIGNER FLOOR FINISH

#### PART I – GENERAL

##### 1.01 SUMMARY

- A. This is the recommended specification for ARDEX SD-M DESIGNER FLOOR FINISH cementitious topping.

##### 1.02 SECTION INCLUDES

- A. ARDEX SD-M DESIGNER FLOOR FINISH
- B. ARDEX CG CONCRETE GUARD®

##### 1.03 QUALITY ASSURANCE

- A. Installation of the ARDEX SD-M must be by an applicator using mixing equipment and tools approved by the manufacturer.
- B. Provide ARDEX SD-M as manufactured by ARDEX INC., 400 Ardex Park Drive, Aliquippa, PA 15001.
- C. Topping shall be able to be installed from a true featheredge to 1/16" thick maximum using the standard mix, and up to 1/2" in thick using a stiffer mix to fill in small areas such as pop-outs and spalls.
- D. Topping shall not require that the substrate be primed.
- E. Topping shall be formulated with a Portland cement matrix, which develops a compressive strength of 5000 psi when tested in accordance with ASTM C109/mod. (air-cure only).
- F. Topping shall be able to be covered by ARDEX CG and other waterborne sealers that are suitable for use over cementitious surfaces as soon as the surface hardens (usually within 1 hour). Solvent-borne and 100% solids sealers may require from 24 hours up to 3 days of drying before they can be installed.
- G. Topping shall not require the addition of latex or any additive other than potable water.

##### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in their original, unopened packages and protect from extreme temperatures and moisture.

##### 1.05 SITE CONDITIONS

- A. ARDEX SD-M is a cementitious material. Observe the basic rules of concrete work. Do not install below 50°F surface temperature. Install quickly if floor is warm and follow hot weather precautions available from the ARDEX Technical Service Department. Never mix with cement or additives other than ARDEX-approved products.

#### PART 2 – PRODUCTS

## 2.01 MATERIALS

- A. The Portland cement-based, self-drying, trowelable, finishing topping shall be ARDEX SD-M.
- B. No primer required over all recommended substrates.
- C. Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).
- D. Sealer shall be ARDEX CG Concrete Guard or other approved sealer.

## 2.02 MIX DESIGNS

- A. Mix ARDEX SD-M powder with water to the desired trowelable consistency. The recommended mixing ratio is 2 1/2 parts powder to 1 part water by volume. When mixing a full bag, use 2 quarts of water to 1 ten lb. bag of powder.
- B. For filling pop-outs and spalls up to 2" in diameter and 2" deep, use 3 1/2 parts by volume of powder to 1 part of water.

## PART 3 – EXECUTION

### 3.01 SUBSTRATE PREPARATION

- A. All subfloors, regardless of material, must be solid, sound and thoroughly cleaned.
- B. All subfloors must be clean, and free of all oil, grease, dirt, curing compounds, and any substance, which might act as a bond breaker. Mechanically clean, if necessary, using shot blasting or other. Acid etching and the use of sweeping compounds or solvents are not acceptable.
- C. Non-porous subfloors, such as ceramic tile and terrazzo must be clean and free of all sealers, waxes, or other surface treatments, which may act as a bond breaker. Professionally strip where necessary.
- D. Subfloors shall be tested and corrected for moisture or any other conditions that could affect the performance of the topping or sealer.

### 3.02 JOINT AND CRACK PREPARATION

- A. **Joints**
  - 1. Moving Joints – honor all expansion and isolation joints up through the underlayment.
  - 2. Saw Cuts and Control Joints – fill all non-moving joints with ARDEX SD-F Feather Finish or ARDEX SD-P InstantPatch as required.
- B. Cracks - All cracks in the subfloor shall be repaired to minimize telegraphing through the underlayment.

### 3.03 APPLICATION OF CEMENTITIOUS TOPPING

- A. Apply a scratch coat of the mix to the substrate with the flat side of a steel trowel to obtain a solid mechanical bond. Apply sufficient pressure to fill all defects and to feather

the product into the subfloor surface. The scratch coat or base coat should be applied to pre-smooth and achieve a uniformly absorbent surface.

- B. It is necessary to have a minimum of two coats of ARDEX SD-M with the total finished thickness of 20 mils (about the thickness of a standard business card). Use the least amount possible to attain the desired smoothness. The finish coat may be applied as soon as the trowel will not damage the base coat. A third application of ARDEX SD-M is optional depending on the desired finish and texture. This application is used primarily to achieve a very smooth troweled finish. Total thickness should not exceed 1/16".
- C. The surface of ARDEX SD-M must always be protected from oil, salt, water, and surface wear by applying a suitable protection system such as concrete sealer or paint. Ardex recommends the use of ARDEX CG CONCRETE GUARD™ to seal ARDEX SD-M that will be exposed to normal foot traffic. The topping must be coated with a wear protection coating suitable for the intended use of the floor. The coating process can begin within 2-3 hours after installation if a water-borne coating is selected.
- D. For certain ARDEX DESIGNER FLOOR applications, ARDEX STONE OIL may be specified. For installation instructions, please refer to the Ardex Technical Brochure.
- E. For areas to receive heavier traffic, as well as areas such as restaurants and food courts, sealing should be done using an epoxy coating. As the performance of epoxy flooring systems varies greatly, the installer is responsible for assessing the suitability of these coatings. Typically, thin applications (20 mils thick) of solvent-borne coatings can proceed after 24 hours of drying at 70°F. Thicker applications and the use of high solids polymer coatings will require a minimum drying time for the ARDEX SD-M of 3-5 days at 70°F.
- F. ARDEX SD-M wear surfaces are intended for foot and moderate, rubber-wheeled forklift traffic and similar uses. Excessive service conditions, such as steel or hard plastic-wheeled traffic, dragging heavy metal equipment or loaded pallets with protruding nails over the floor, will cause gouging and indentations. ARDEX SD-M is not a resurfacing topping for heavy-duty manufacturing or industrial floors, or in chemical environments requiring customized industrial toppings.

### **3.04 FIELD QUALITY CONTROL**

- A. Where specified, field sampling of the Ardex topping is to be done by taking an entire unopened bag of the product being installed to an independent testing facility to perform compressive strength testing in accordance with ASTM C 109/modified: air-cure only. There are no in situ test procedures for the evaluation of compressive strength.

### **3.05 PROTECTION**

- A. Prior to the installation of the sealer, the surface of the underlayment should be protected from abuse by other trades by the use of plywood, Masonite or other suitable protection course.

**END OF SECTION**