

SECTION 03540

RECOMMENDED SPECIFICATION FOR ARDEX CD and ARDEX CD FINE CONCRETE DRESSING

PART I – GENERAL

1.01 SUMMARY

- A. This is the recommended specification for ARDEX CD Concrete Dressing Driveway and Sidewalk Refinisher for resurfacing interior and exterior cleaned concrete or cementitious surfaces such as sidewalks, driveways, patios, curbs, balconies, pool decks, block walls, columns, etc.

1.02 SECTION INCLUDES

- A. ARDEX CD and CD Fine Concrete Dressing Driveway and Sidewalk Refinisher
- B. ARDEX Concrete Guard High Performance, High Solids concrete Sealer

1.03 QUALITY ASSURANCE

- A. Installation of ARDEX CD, ARDEX CD Fine and ARDEX Concrete Guard must be by an applicator using mixing equipment and tools approved by the manufacturer.
- B. Concrete repair material shall be able to be installed at a thickness of 1/24" to 1/8" as a dressing and up to 1/2" thick in small areas to patch small holes.
- C. Concrete repair material shall have a compressive strength of 4000 psi after 28 days per ASTM C 109/mod (air cure only).
- D. Concrete repair material shall be walkable after 2 hours at 70°F, capable of being sealed as soon as it is hard, and receive normal traffic after the sealer dries for 24 hours.
- E. Concrete repair material shall be capable of being applied by trowel, broom, squeegee, or by spraying through a hopper gun.
- F. Manufacturer's certification that the product is Portland cement-based having an inorganic binder content which is a minimum 80% Portland cement when tested per ASTM C150: Standard Specification for Portland Cement.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in their unopened packages and protect from extreme temperatures and moisture. Protect liquids from freezing.

1.05 SITE CONDITIONS

- A. ARDEX CD and CD Fine are cementitious materials. Observe the basic rules of concrete work. Do not install below 50°F surface temperature. Do not install if rain is expected within 6 to 8 hours or if freezing temperatures are expected within 24 hours. Install quickly if substrate 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 cement-based, polymer-modified concrete resurfacing material shall be ARDEX CD to receive a standard broom finish, or ARDEX CD Fine to receive a light-broom or smooth trowel finish.
- B. Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).
- C. No priming is required.
- D. The sealer for the ARDEX CD or CD Fine shall be ARDEX Concrete Guard Clear or Gray.

2.02 MIX DESIGNS

- A. Standard mixing ratio: Mix each bag of ARDEX CD (40 lb.) with 5 quarts of water. Mix each bag of ARDEX CD Fine (20 lb.) with 2 ½ quarts of water. Product shall be mixed in an ARDEX T-10 Mixing Drum using an ARDEX T-1 Mixing Paddle and a 1/2" heavy-duty drill (min. 650 rpm). As an alternate, small batches can be mixed using 2 ¾ parts of powder to 1 part by volume of water in a clean 5 gal. pail using an ARDEX T-2 Mixing Paddle. Mix thoroughly for approximately 2-3 minutes to obtain a lump-free mixture. Follow written instructions per the ARDEX CD or CD Fine bag label.
- B. Patching mix: For small areas of repair such as pop-outs or spalls, mix 4 parts powder with 1 part of water. Allow patched areas to set for approximately 45 minutes prior to dressing with ARDEX CD or CD Fine.

PART 3 – EXECUTION

3.01 PREPARATION

- A. All concrete and masonry substrates must be sound, solid, dry, and completely clean.
 - 1. All cracks and spalls must be repaired prior to installing the dressing.
 - 2. All substrates must be of adequate strength, clean, and free of all oil, grease, dirt, curing compounds and any substance that might act as a bondbreaker before priming. Mechanically clean where necessary using high pressure power washing, shot blasting, scarifying or other. Acid etching and the use of sweeping compounds and solvents are not acceptable.
- B. JOINT PREPARATION
 - 1. Moving Joints – honor all expansion and isolation joints up through the underlayment.
 - 2. Clean out debris from expansion joints and tape or mask the joints off to prevent ARDEX CD from filling the joint. Use a lawn edger to clean around the walk or driveway, as well as around planter boxes and landscaped areas.
 - 3. Saw Cuts and Control Joints – fill all non-moving joints with ARDEX CD or CD Fine as required.

3.02 APPLICATION OF CONCRETE DRESSING

A. INSTALLATION

1. ARDEX CD and CD Fine shall be installed using traditional concrete repair techniques, to include the use of a steel trowel and/or broom to achieve the desired finish. ARDEX CD and CD Fine may also be applied using a squeegee or hopper gun.
2. Use the least amount of material possible to obtain complete coverage over the concrete surface. For maximum coverage, use the flat trowel application technique and then broom-finish. Work in areas small enough so that you can reach the newly applied surface easily to apply the broom finish without walking on it. Broom finish as you go but certainly before the dressing takes a firm set (usually 10-15 minutes depending upon jobsite conditions). Maintaining a "wet edge" as you work will help to minimize natural color variations that can occur between sections.
3. On vertical surfaces such as walls or stair faces, trowel, brush or spray the dressing using a hopper gun directly onto the prepared area. Smooth or brush the material to the desired finish.
4. If the substrate is very porous, you may experience that the material is setting very quickly or pinholes are left in the surface. To eliminate this condition, scratch coat or use a small-notched trowel to apply an initial layer of ARDEX CD Fine into the surface. Immediately re-coat the same area with fresh material and then flat trowel or broom finish the area to achieve the desired finish. Note: this technique will reduce overall coverage, as slightly more material is required.
5. The surface of the dressing can be broom finished as work proceeds.

3.03 SEALING WITH ARDEX CONCRETE GUARD

A. As is the case with all concrete surfaces in general, ARDEX CD and CD Fine should be sealed with a waterborne, breathable concrete sealer such as ARDEX Concrete Guard to resist damage from standing water, salt, oil as well as staining and marking. Sealing of the ARDEX CD can proceed as soon as the surface of the dressing has hardened sufficiently to resist damage from the sealing installation.

B. INSTALLATION

1. ARDEX Concrete Guard should be applied in two thin coats, allowing 2-4 hours between coats, depending upon atmospheric conditions. (Back-rolling is recommended when spraying to prevent puddling.)
2. When outdoors, do not apply if rain, fog, or extremely high humidity is expected within 6-8 hours or if freezing temperatures could occur within 24 hours of application. Do not apply on surfaces under 50°F or over 90°F.
3. Allow ARDEX Concrete Guard to cure a minimum of 24 hours before normal traffic, and a minimum of 72 hours before heavy traffic.
4. ARDEX Concrete Guard is available in clear or "Concrete Gray". While clear will be appropriate for most jobs, the use of Concrete Gray will provide a more uniform appearance on projects where different concrete substrates exist.

3.04 FIELD QUALITY CONTROL

- A. Where specified, field sampling of the ARDEX CD or CD Fine 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.
- B. COLOR: ARDEX CD is formulated from Portland cement and is a light gray color when dry. As concrete color and jobsite conditions vary widely, it is not intended that this product will match the color of the concrete being resurfaced or an adjacent concrete pad. Jobsite conditions such as direct sunlight and wind, as well as the surface of the dressing being exposed to moisture before it completely sets, can lead to minor color variations in the appearance of the dressing. Should this condition occur, it could often be completely corrected by pre-wetting the surface of the discolored dressing and misting it with a vinegar solution diluted with 3 parts of water. Allow the vinegar to stand on the surface of the dressing for 10 minutes, misting it again should it dry out before that time. After 20 minutes, simply rinse the surface with water and allow it to dry.
- C. If the discoloration persists, use ARDEX Concrete Guard in the Concrete Gray color or consult the ARDEX Technical Department for additional information.

3.05 MAINTENANCE

- A. In order to attain maximum life from the dressing, it is essential that the surface be properly sealed and protected. Reseal as required depending upon traffic volume and conditions.

END OF SECTION