

ARDEX GUIDE SPECIFICATION

ARDEX CD™ Concrete Dressing and ARDEX CD FINE™ Concrete Dressing Polymer-Modified, Portland Cement-Based, Resurfacing Compound

SECTION 03 01 30 MAINTENANCE OF CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, general provisions of the Contract, and other related construction documents such as Division 01 specifications apply to this Section

1.2 SUMMARY

- A. This Section includes trowel-grade concrete resurfacing compound.
 - 1. ARDEX CD™ Concrete Dressing
 - 2. ARDEX CD FINE™ Concrete Dressing
 - 3. ARDEX ARDIFIX™ Two-Part, Low Viscosity Rigid Polyurethane Crack & Joint Repair
 - 4. ARDEX ARDISEAL™ RAPID PLUS Semi-Rigid Joint Sealant
 - 5. ARDEX CP™ Concrete Patch
 - 6. ARDEX Concrete Guard™ High-Performance, High Solids, Water-borne Acrylic Concrete Sealer
- B. Related Sections include the following:
 - 1. Section 03 30 00, Cast-In-Place Concrete

1.3 REFERENCES

- A. ASTM C 109/Mod, Compressive Strength

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Safety Data Sheets.
- B. Qualification Data: For Installer

1.5 QUALITY ASSURANCE

- A. Installation of the ARDEX product must be completed by a factory-trained, certified applicator, such as an ARDEX LevelMaster® Elite or Choice Contractor, using mixing equipment and tools approved by the manufacturer. Please Contact ARDEX Engineered Cements (724) 203-5000 for a list of recommended installers.
- B. Manufacturer Experience: Provide products of this section by companies which have successfully specialized in production of this type of work for not less than 5 years. Contact Manufacturer Representative prior to installation.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
- B. Store products in a dry area with temperature maintained between 50° and 85°F (10° and 29°C) and protect from direct sunlight.
- C. Handle products in accordance with manufacturer's printed recommendations.

1.7 PROJECT CONDITIONS

- A. Do not install material below 50°F (10°C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department.

PART 2 – PRODUCTS

2.1 CONCRETE OVERLAY

- A. Portland cement-based, polymer-modified concrete resurfacing material
 - 1. Acceptable Products:
 - a. ARDEX CD or ARDEX CD FINE Concrete Dressing; Manufactured by ARDEX Americas, USA, 724-203-5000, www.ardexamericas.com
 - 2. Performance Requirements:
 - a. Application: Trowel, Squeegee or Broom
 - b. Compressive Strength: 4000 psi (27.6 N/mm²) at 28 days
 - c. Working Time: Approx. 10-15 minutes
 - d. Pot Life: 30 minutes
 - e. Walkable: Approx. 2 hours
 - f. Color: Gray
 - g. Install waterborne coating: approx. 2 hours
 - h. VOC: 0
 - i.

2.2 DORMANT CRACK REPAIR

- A. Fully Rigid, High-modulus, 100% solids material
 - 1. Acceptable products: ARDEX ARDIFIX™ Two-Part, Low Viscosity Rigid Polyurethane Crack & Joint Repair; Manufactured by ARDEX Americas, USA, 724-203-5000, www.ardexamericas.com

2.3 JOINTS AND MOVING CRACKS

- A. Semi-Rigid Joint Sealer
 - 1. Acceptable products: ARDEX ARDISEAL™ RAPID PLUS Semi-Rigid Joint Sealant; Manufactured by ARDEX Americas, USA, 724-203-5000, www.ardexamericas.com

2.4 CONCRETE PATCH/REPAIR

- A. Cementitious topping for filling and repairing concrete above, on or below grade. Engineered with Portland cement and select high-performance polymers.
 - 1. Acceptable products: ARDEX CP™ Concrete Patch; Manufactured by ARDEX Americas, USA, 724-203-5000, www.ardexamericas.com

2.5 WATER: Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).

PART 3 – EXECUTION

3.1 PREPARATION

- A. General: Prepare substrate in accordance with manufacturer's instructions.
 - 1. All concrete and masonry substrates must be structurally sound, solid, dry, and thoroughly clean and free of any form release, sealers or paints, patching compounds, dust, dirt, oils and any other contaminant that could act as a bond breaker. High-pressure (5,000 psi) power washing may also be used to remove dust, dirt and debris, through the concrete must be allowed to dry thoroughly before proceeding. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical. Acid etching and the use of sweeping compounds and solvents are not acceptable. The use of sanding equipment is not an effective method to remove curing and sealing compounds. Clean debris out of expansion joints and tape or mask the joints off to prevent ARDEX CD or ARDEX CD FINE from filling the joint. Use a lawn edger to clean around the walk or driveway, as well as around planter boxes and landscaped areas. Substrates must be dry for successful installation.
 - 2. All cracks and spalls must be repaired prior to installing the dressing. ARDEX CD or ARDEX CD FINE, can be used for minor patching, filling small holes, gouges or spalls (up to 1" [25 mm] diameter and 1/2" [12 mm] deep). For larger or deeper repairs, use ARDEX CP CONCRETE PATCH.

3. The concrete substrate must be absorbent to receive ARDEX CD & CD FINE. Any additional preparation required to achieve this must likewise be mechanical.

A. Joint Preparation

1. Prior to the installation, all dormant cracks must be filled with ARDEX ARDIFIX™. The repair material must be sand broadcast to refusal while still fresh. Allow to cure fully, and then remove all excess sand.
2. The filling of dormant cracks is recommended to help prevent cracks from showing through the dressing. However, should movement occur, cracks will reappear.
3. All joints as well as any moving cracks, must be honored up through the topping by installing a flexible compound specifically designed for us in moving joints, such as ARDEX ARDISEAL Rapid Plus.

3.2 APPLICATION OF ARDEX CD or ARDEX CD FINE CONCRETE DRESSING

A. Mixing:

1. When mixing sanded materials, ARDEX recommends using the ARDEX DUSTFREE™ or a standard “gutter hook” vacuum attachment in combination with a wet/dry (Shop-Vac® style) vacuum and HEPA dust extraction vacuum system. Additionally, each bag should be handled with care and emptied slowly to avoid creating a plume of dust. Contact the ARDEX Technical Service Department for more details on ARDEX products and air quality management.
2. Refer to the technical data sheet for the recommended water to material mixing ratio.
3. Mix using a 1/2” (12 mm, 650 rpm) low speed heavy-duty mixing drill with an ARDEX T-2 ring mixing paddle. Mix to a uniform, lump-free consistency. Do not overwater.

B. Priming:

1. No priming is required over standard absorbent concrete. However, to minimize the potential for pinholes, prime with ARDEX CG™ 2.0 Concrete Guard. Dilute ARDEX CG 2.0 with water in a 1:1 ratio. Allow the primer coat to dry thoroughly (min. 3 hours depending upon jobsite conditions) before proceeding with the installation.

C. Application: ARDEX CD and ARDEX 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 ARDEX CD FINE may also be applied using a squeegee or hopper gun.

1. Pour the mix onto an area of concrete and flat trowel, squeegee or broom it onto the surface while applying enough pressure to ensure good dressing-to-concrete contact. Maintain a “wet edge” during installation to help minimize natural color variations that can occur between sections.
2. Immediately apply a light broom-finish to achieve the desired texture, working in areas small enough to permit finishing without walking on the freshly installed dressing. ARDEX

CD FINE has a working time of approximately 10 to 15 minutes, depending on jobsite conditions.

3. For 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. For minor patching, filling small holes, gouges or spalls (up to 1" [25 mm] diameter and 1/2" [12 mm] deep), mix 4 parts powder to 1 part water by volume and apply to the prepared surface with a flat steel trowel or putty knife. Repair areas should be allowed to set firmly (30 to 45 min. at 70°F/21°C) before applying the finish coat of the dressing. Cool ambient and surface temperatures will slow setting time. For larger or deeper repairs, use ARDEX CP Concrete Patch
5. As is the case with all concrete surfaces in general, ARDEX CD and ARDEX CD FINE should be sealed with a waterborne, breathable concrete sealer such as ARDEX CG Concrete Guard 2.0 to resist damage from standing water, salt, oil as well as staining and marking. Sealing of the ARDEX CD or ARDEX CD FINE can proceed as soon as the surface of the dressing has hardened sufficiently to resist damage from the sealer installation.

D. Curing

1. Although ARDEX CD™ and CD FINE™ require no special curing procedures, avoid applying if rain is expected within 6 to 8 hours or freezing temperatures could occur within 24 hours of application. As with any cementitious material, these conditions can alter the appearance and performance of the dressing.

3.3 SEALING WITH ARDEX CG CONCRETE GUARD

A. Mixing:

1. The contents of the ARDEX CG container must be thoroughly stirred just prior to use to ensure a uniform consistency. For best results, mix with a mechanical mixing paddle and low speed drill.

B. Application:

1. Pour the ARDEX CG into a paint tray and apply the sealer to the surface with a 3/8" nap paint roller. Do not pour the sealer directly onto the concrete surface. When spraying ARDEX CG, back rolling is recommended to prevent puddles.
2. ARDEX Concrete Guard should be applied in a minimum of two thin coats, allowing 2-4 hours between coats, depending upon atmospheric conditions.
3. When outdoors, do not apply if rain, dew, 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.
4. Allow ARDEX Concrete Guard to cure a minimum of 24 hours before normal traffic, and a minimum of 72 hours before heavy foot and rubber-wheeled traffic.

C. Maintenance:

1. 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