

ARDEX GUIDE SPECIFICATION

ARDEX ARDIFIX™

Low Viscosity Rigid Polyurethane Crack and Joint Repair

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, Division 03, and Division 09 specifications that apply to this Section

1.2 SUMMARY

- A. This Section includes a two-part polyurethane repair compound for cracks, control joints, spalls and pop-outs on interior and exterior applications.

- 1. ARDEX ARDIFIX™ Two-Part, Low Viscosity Rigid Polyurethane Crack & Joint Repair

- B. Related Sections include the following:

- 1. Section 03 54 16, Hydraulic Cement Underlayment
 - 2. Division 09 Flooring Sections

1.3 REFERENCES

- A. ASTM D638 – Standard Test Method for Tensile Properties of Plastics
- B. ASTM D624 – Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers

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 applicator, such as an ARDEX LevelMaster Elite® or ARDEX 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 MAINTENANCE OF CAST-IN-PLACE CONCRETE

- A. Low Viscosity Rigid Polyurethane Crack and Joint Repair
 - 1. Acceptable Products:
 - a. ARDEX ARDIFIX™; Manufactured by ARDEX Americas: 400 Ardex Park Drive, Aliquippa, PA, 15001, USA, (724) 203-5000, www.ardexamericas.com
 - 2. Performance and Physical Properties: Meet or exceed the following values for material cured at 70° F+/-3°F (21° C+/-3°C) and 50% +/-5% relative humidity:
 - a. Recommended thickness: No limits
 - b. Coverage: Varies with depth of fill area
 - c. Pot Life: Approx. 2 minutes
 - d. Percent Solids: 100% by weight
 - e. Tensile Strength (ASTM D638): Approx. 4,150 psi (292 kg/cm²)
 - f. Elongation (ASTMD624): 243 pli
 - g. Shore D Hardness: 70
 - h. Viscosity: 60 cps

- i. Tack Free: Approx. 10 minutes
- j. Full service: 45 minutes
- k. VOC: 0 g/L, calculated SCAQMD 1168

PART 3 – EXECUTION

3.1 PREPARATION

- A. Concrete Subfloors: Prepare substrate in accordance with manufacturer's instructions.
 - 1. All concrete must be structurally sound, solid, dry and free of laitance, dirt, debris, coatings, sealers and any contaminant that may act as a bond breaker. A dry diamond blade may be used to prepare cracks and create a clean surface for bonding. Do not use sweeping compounds, solvents or acid etching to prepare the surface. A wire brush or twisted wire wheel may be used to remove any loose concrete or dirt. Cracks or joints should be free of dust, dirt, oils, and any other debris. New concrete should be fully cured and free of movement.

3.2 APPLICATION OF ARDEX ARDIFIX™:

- A. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
- B. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas from contact due to mixing and handling of materials.
- C. **PRECAUTION:** This is a fast setting material. The following procedures will minimize waste and achieve the desired results. Failure to follow these procedures can cause isolated soft spots or subsequent failure.
- D. **IMPORTANT:** During set-up of cartridge (purging air and balancing) and initial dispensing of material, keep cartridge and nozzle assembly pointed straight up. **AFTER** purging / balancing and initial shot of material, always keep the cartridge and nozzle pointed downward to prevent material in the nozzle from flowing back into the cartridge.
- E. Application: Comply with manufacturer's printed instructions and the following.
 - 1. Prepare joints and cracks prior to starting a new cartridge. If at all possible, schedule dispensing to consume an entire cartridge with no interruption of material flow.
 - 2. Shake the cartridge vigorously for 10 seconds and then stand the cartridge upright for about a minute. Insert the cartridge into the dispenser, making sure it is properly positioned with the shoulder of the cartridge flush with the front bracket of the dispenser. Remove the plastic cap from the top of the cartridge. Important! Before attaching the static mixing nozzle, dispense a small amount of material onto a disposable surface until both components flow evenly from the cartridge. After purging and balancing always point cartridge downward when not dispensing to prevent mixed material in the nozzle from flowing back into the cartridge.

3. Place the nozzle onto the cartridge and secure it by tightening in a clock-wise direction. Make sure the nozzle and cartridge assembly is secure before proceeding.
4. ARDEX ARDIFIX has a pot life of only 2 minutes. Apply continuously once opened to prevent the tip from becoming clogged. Place the mixing nozzle directly over the crack, joint or repair area. Dispense material using full smooth trigger pulls (no short choppy strokes) and allow material to gravity feed into the crack, joint or repair area. Sand Clean-Up should be as follows:
 - i. Do not sweep. Using a rubber squeegee, consolidate excess sand into piles
 - ii. Shovel the piles of sand into barrels.
 - iii. Vacuum remaining sand using a heavy-duty, bucket-style (Shop-Vac®-style) vacuum and HEPA dust extraction vacuum system.
5. For installation to receive an ARDEX Moisture Control System, Underlayment or Topping, immediately broadcast clean sand size #30 or #35 into the freshly applied material. ARDEX recommends wearing an N-95 dust mask when broadcasting sand.
6. For applications where no leveling or smoothing will be performed prior to installing finish flooring, ARDEX ARDIFIX repaired cracks should be filled and sand broadcasted as above; however, each crack should be filled to create a 1/8" – 1/4" recessed repair. This recessed area can then be filled with ARDEX FEATHER FINISH or ARDEX FORTI FINISH and sanded to create a seamless repair.
7. For installations where no further work will be done, overfill the crack, joint or repair area so the material is slightly higher than the face of the concrete slab. Allow the ARDEX ARDIFIX to set for approximately 10 to 15 minutes, and then use a sharp razor scraper to shave excess material from the top of the slab.
8. For filling spalls and pop-outs, mix ARDEX ARDIFIX 1:1 with dry sand to a paste-like consistency, then fill and smooth with a trowel or putty knife. Repairs can be put into service in 10 to 15 minutes and ground smooth in as little as 45 minutes.
9. For clean-up, use MEK or similar while the material is still fresh, carefully following all instructions and warnings on the solvent container. Once ARDEX ARDIFIX cures, it can be removed by grinding or similar.
10. ARDEX ARDIFIX will be tack free in approximately 10 minutes, at which time it can be exposed to light traffic and non-harsh chemicals. ARDEX ARDIFIX can be opened to full use after a minimum cure of 45 minutes.

3.3 FIELD QUALITY CONTROL

- A. Where specified, field sampling of the ARDEX products is to be done by taking an entire unopened bag/unit of the product being installed to an independent testing facility to perform testing. There is no in-situ test method applicable for this system.

END OF SECTION