

ARDEX GUIDE SPECIFICATION
ARDEX ULTRAFLOOR POLISHED CONCRETE
Part of the ULTRAFLOOR® ARDEX® DIAMATIC® Polished Concrete System

SECTION 03 35 53
POLISHED 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 products and procedures for the installation of the ULTRAFLOOR® Polished Concrete System using a multi-step dry mechanical process and accessories specified to achieve specified Level (A, B or C) gloss finish:
 - 1. DIAMATIC Mechanical Diamond Grinding and Polishing Equipment
 - 2. ARDEX Concrete Repair Materials
 - 3. ARDEX Concrete Topping Treatment Chemicals
- B. Related Sections include the following:
 - 1. Section 03 30 00, Cast-In-Place Concrete
 - 2. Section 07 26 19, Topical Moisture Vapor Mitigation

1.3 REFERENCES

- A. ASTM C 109M, Compressive Strength Air-Cure Only
- B. ASTM C348, Flexural Strength of Hydraulic-Cement Mortar
- C. ASTM F2170, Relative Humidity in Concrete Floor Slabs Using in situ Probes
- D. ASTM F1869, Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- E. ASTM 710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- F. ASTM E430, Standard Test Method for Measurement of Gloss of High-Gloss Surfaces by Abridged Goniophotometry.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.
- B. Qualification Data: Provide written documentation from the manufacturer confirming that installer meets the qualifications as specified and is eligible for manufacturer's warranty.
- C. Maintenance Data: Provide manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under intended use. These instructions should contain precautions against cleaning products and methods that may be detrimental to finishes and performance.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
1. The ULTRAFLOOR® ARDEX® DIAMATIC® Polished Concrete System consists of a process and products engineered and manufactured by ARDEX and DIAMATIC. Any substitutions are not permitted and void warranty.
- B. Installer Qualifications:
1. Product(s) for the ULTRAFLOOR® ARDEX® DIAMATIC® Polished Concrete System must be installed by an ARDEX DIAMATIC factory trained or approved installer either as a single source or through a joint venture, including the use of DIAMATIC equipment and diamond abrasives, and ARDEX DIAMATIC concrete preparation, toppings, joint treatment and chemical hardening and finishing materials
 2. Qualified installers may include an *ARDEX LevelMaster Elite™* who specializes in the installation of ARDEX products, a *DIAMATIC Elite™* who specializes in the use of DIAMATIC polishing equipment or an *ULTRAFLOOR ELITE™* who has specific experience with the installation of ARDEX DIAMATIC products and systems.
 3. Installer must be approved in writing by ARDEX or DIAMATIC and experienced in performing specified work similar in design, products and scope of this project, with a documented track record of successful, in-service performance and with sufficient production capabilities, facilities and personnel to produce specified work.
 4. A factory-trained, competent supervisor must be maintained on site during all times during which specified work is performed.
 5. For national brand specific projects, Diamatic Management Services (DMS) may be considered for installation management, contractor assistance and advanced project support. DMS: 5220 Gaines Street, San Diego, CA 92110, 866-295-5512, www.diamaticmanagementservices.com.
- C. Mock-Up: Before performing the work in this section, an on-site mock-up representative of specified process, surface, finish, color and joint design/treatments must be installed for review and approval. These mock-ups should be installed using the same Installer personnel who will perform work. Approved mock-ups may become part of completed work, if undisturbed at time of substantial completion.
- D. Pre-Installation Conference: Prior to the installation of the ULTRAFLOOR Polished Concrete System, an on-site conference shall be conducted to review specification requirements.
1. Required attendees include the Owner, Architect, General Contractor, Subcontractor, ARDEX Representative and/or DIAMATIC Representative.
 2. The minimum agenda shall include a review of the site conditions, construction documents, schedule, installation procedures, protection procedures and submittals.
- E. Warranty: Provide manufacturer's 10-year ULTRAFLOOR System Warranty.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in original containers, bearing manufacturer's labels indicating brand name and directions for storage, factory numbered and sealed until ready for installation.
- B. Store all materials in a dry, climate-controlled environment at a minimum of 50°F (10°C) and maximum of 85°F (29°C).
- C. Handle products in accordance with manufacturer's printed recommendations.

1.7 SITE CONDITIONS

- A. Inspect the existing substrate and document unsatisfactory conditions in writing. Verify that surfaces and site conditions are ready to receive work. Correct unacceptable conditions prior to installation of System. Commencement of work constitutes acceptance of substrate conditions.
- B. Close areas to traffic during and after application for a time period recommended by the manufacturer.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS:

- A. Where spalls, repair or minor patchwork is necessary apply ARDEX PC-R™ as necessary and in accordance with recommendations, applied at the appropriate time during the polishing process.
- B. If necessary, correct excessive pinholes with ARDEX PC-M™ . Contact the ARDEX Technical Services department for recommendations.

2.2 CONCRETE POLISH EQUIPMENT & TOOLING

- A. Equipment and Tooling for use as part of the multi-step dry mechanical process and accessories. Acceptable products include:
 - 1. DIAMATIC BMG-780 or BMG-735 Planetary Grinder and Polisher; DIAMATIC USA: 5220 Gaines Street, San Diego, CA 92110, 1-866-295-5512, www.diamaticusa.com
 - a. Features: Large Platform: 32” planetary floor polisher. Head pressure of 600 lbs. Or equal as recommended by DIAMATIC USA.
 - b. Required Tooling: DIAMATIC Diamond Abrasives
 - 1) Metal Bonded Diamonds - 60/80 Grit of medium and hard bonded metal.
 - 2) Transitional Diamonds Ceramic Bonded - #1 Grit.
 - 3) Resin Bonded Diamonds - 200, 400, 800, 1500 Grit.
- B. DIAMATIC Micro Polisher – Burnishers; DIAMATIC USA: 5220 Gaines Street, San Diego, CA 92110, 1-866-295-5512, www.diamaticusa.com
 - 1. Specific weight and RPM are required to reach temperature of 100°F for application of PC FINISH™ .
 - 2. Required Tooling: DIAMATIC FLOR-GRIT® Diamond Impregnated Pads - 800, 1500, 3000 Grit.
 - 3. Other equipment as necessary for small areas and edge work as recommended by DIAMATIC USA.
 - 4. Power generator capable of supplying a minimum output of 30kw and up, and 480 Volt three phase power.
 - 5. All grinding and polishing completed with grinder/polisher equipment should be connected to a dust collector.

Note: In some cases, and only with DIAMATIC’s approval, burnishing, grinding and polishing machines may be substituted, provided that the specified DIAMATIC abrasives and blades can still be used.

2.3 CONCRETE TREATMENT CHEMICALS

- A. Concrete treatments designed for use in conjunction with the installation of the ULTRAFLO® Polish Concrete System. Acceptable products include:

1. Treatment Chemicals; ARDEX Engineered Cements: 400 ARDEX Park Drive Aliquippa, PA 15001, 1-888-512-7339, www.ardexamericas.com; DIAMATIC USA: 5220 Gaines Street, San Diego, CA 92110, 1-866-295-5512, www.diamaticusa.com.
 - a. Densifier: ARDEX PC 50™ or DIAMATIC FLOR-SIL™ Lithium Hardener Densifier for Standard Concrete;
 - b. Finish Treatment: ARDEX PC FINISH™ or DIAMATIC FLOR-FINISH™ Stain and Wear Protection Treatment (high or low gloss)
 - c. Maintenance Treatment: DIAMATIC FLOR Maintainer™ Gloss, Stain and Wear Protectant

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect all concrete substrates and conditions under which the ULTRAFLOOR® Polished Concrete System is to be installed.
- B. Verify that existing concrete has cured a minimum of 28 days before installing the ULTRAFLOOR® Polished Concrete and meets the requirement of 3000 psi and 100 pcf.
- C. Conduct pre-installation conference, per Section 1.05 C.

3.2 PREPARATION

A. DEMOLITION

1. Clear surfaces of any debris and construction materials.
2. If a generator is not provided by the Installer, power connections for the equipment of the ULTRAFLOOR® ARDEX DIAMATIC Polished Concrete System shall be located and prepared by general contractor.
3. Using the appropriate mechanical means and methods, remove existing floor coverings and coatings, including but not limited to carpet VCT, ceramic tile and grout, wood, epoxy/ urethane, quartz, mastic, adhesives, paint or other non-concrete floor materials. Adhesives must be removed to their penetrated depth.
 - a. **Note:** The mechanical removal of resilient flooring, backing, lining felt, cutback and other adhesives can be hazardous, as certain materials may contain asbestos or crystalline silica. Do not sand, dry sweep, dry scrape, drill, saw, bead blast, grind, mechanically chip or pulverize these materials, as harmful dust may result. Inhalation of this dust may cause asbestosis or other bodily harm. Please consult the adhesive manufacturer, the Resilient Floor Covering Institute (www.rfci.com) and all applicable government agencies for rules and regulations concerning the handling and removal asbestos-containing materials.
 - b. Prevent any damage to concrete slab surface during demolition from chipping hammers. Existing flooring should be removed mechanically with walk-behind or ride-on scraping equipment.
 - 1) Prepare the existing concrete mechanically by diamond grinding using aggressive, metal bonded DIAMATIC Polycrystalline diamonds (18/20 Grit or 30/40 Grit), to remove all contaminants and provide a sound concrete surface free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil and other contaminants.
 - 2) Chemical preparation of the substrate is NOT acceptable, including but not limited to acid etching, sweeping compounds, solvents and adhesive removers.

- 3) Suppress dust during demolition with the use of dust collection equipment to reduce or eliminate airborne concrete and substrate dust.
- 4) Where existing concrete is cracked, damaged, spalled, not within specified tolerance, or contains unacceptable levels of contaminants or moisture vapor, the Installer of the ULTRAFLOOR[®] ARDEX DIAMATIC Polished Concrete System will evaluate conditions and proceed with appropriate ULTRAFLOOR[®] System components.

3.3 CONCRETE REPAIR

A. Cracks (Indoor/Outdoor)

1. Crack repair shall be completed after the first metal bond diamond grind and floor cleaning.
 - a. Cracks to be repaired in the concrete surface shall be crack chased out on a high-speed angle grinder to a minimum depth of 3/8" and made to eliminate any feathered edges.
 - b. The edges of the crack may be taped to eliminate possible staining from repair material.
 - c. Clean out any dust or debris and then apply ARDEX ARDIBOND AP[™] or ARDEX ARDIFIX[™] to fill the crack chased areas. Read and follow ARDEX ARDIBOND AP or ARDEX ARDIFIX detailed instructions as outlined in the Technical Data Sheet.
 - d. All crack filling material shall be overfilled. Immediately after application of ARDEX ARDIBOND AP or ARDEX ARDIFIX, silica sand or the concrete grindings may be broadcast to rejection over the crack repair material. The silica or floor grindings will reduce the visibility of the repaired crack and take on a similar color and appearance to surrounding concrete when stained.
 - 1) Cracks smaller than 1/8" can be left as a part of the finished concrete, unless otherwise specified. Cracks shall be vacuumed to remove all loose debris and contaminants.
 - 2) Cracks smaller than 1/8" can be filled with ARDEX ARDIFIX.
 - 3) Cracks greater than 1/8" shall be filled with ARDEX ARDIBOND AP.
 - 4) Cracks shall be overfilled and broadcast to refusal with play sand or concrete shavings, and shall be subsequently ground down to the level of the concrete surface.
 - 5) All crack filling material shall installed and allowed to cure in strict accordance with the manufacturer's recommendations before proceeding with the next step in the ULTRAFLOOR[®] process.

B. Spalls (Indoor/Outdoor)

1. Spall repair to be completed after the first metal bond diamond grind and floor cleaning, or prior to the beginning of the ULTRAFLOOR[®] process installation.
2. For complete installation details for spall repair materials, please refer to the ARDEX Technical Brochure.
3. For polishing instructions, please refer to the individual ULTRAFLOOR[®] ARDEX DIAMATIC specifications for each component.
4. Spalls up to 4" (10 cm) wide and 1" (2.5 cm) deep shall be filled with ARDEX PC-R[™]. Allow a minimum of 16 to 24 hours drying time prior to beginning the ULTRAFLOOR[®] polishing process.
5. OR Spalls up to 4" (10 cm) wide and 1" (2.5 cm) deep can be filled with ARDEX ARDIBOND AP or ARDEX ARDIFIX. Overfill all applications and broadcast sand or

- concrete grindings to refusal so that they may be ground down to match the level of the concrete surface after dry time.
6. Spalls greater than 4" (10 cm) wide and 1" (2.5 cm) deep shall be filled with ARDEX PC-R. Allow a minimum of 16 to 24 hours drying time prior to beginning the ULTRAFLOOR polishing process.
- C. Large Area Concrete Repair (Indoor)
1. Where large area concrete repair is needed, ARDEX PC-T™ shall be used in accordance with the information presented in the ARDEX Technical Brochure. For polishing instructions, please refer to the ARDEX PC-T component specification.
- D. Joint Fill (Indoor/Outdoor)
1. All joint fill materials shall be installed in accordance with the written recommendations provided in the ARDEX Technical Brochures.
 2. For the best results all joints should be filled after the first pass of metal bonded diamonds, but before any further grinding continues.
 3. If the joint filling will occur after the polishing process, apply ARDEX PC 50 or DIAMATIC FLOR- SIL tape, or soap to the edge of the concrete to keep the joint filler from staining the concrete.
 4. Prior to filling joints, repair badly spalled joint edges per ACI 302.1R-04.
 - a. Grind the outside edges of all spalls to eliminate any feathered edges and make sure that the minimum depth of the spall is ½". Mechanically prepare the joint area, and chip out any concrete less than ½" in depth.
 - b. Apply ARDEX ARDIBOND AP or ARDEX ARDIFIX to the spalled area using a putty knife to reform the edges and surface to the original shape.
 5. Once the spalled areas are repaired, the entire joint and spall areas shall be filled with ARDEX ARDIBOND AP. Once cured, saw cut the joint to the original dimensions, and then clean the joint and fill with ARDEX ARDISEAL™ RAPID PLUS.
 6. Slightly overfill the joint with enough material to shave flush with the concrete. If the level of the joint filler sinks down, immediately add enough material to over fill the joint. Shave the joint filler flush with the concrete with a shaving tool with a sharp blade. ARDISEAL RAPID PLUS can be shaved in 30 to 40 minutes at 70°F (21°C).
 7. Remove all tape and/or soap from the surface around the joint.
 8. Micro-Polish the surface with appropriate grit DIAMATIC FLOR-GRIT pad.

3.4 GLOSS ATTAINMENT (ASTM E430)

- A. Gloss readings are not to be obtained through the use of any microfilming products, sealers, coatings, enhancers or as the result of resin transfer from resin bond abrasives.
- B. Readings shall be taken not less than 10' (3 m) on center in field areas and within 1' (0.3 m) of floor area perimeters. In no case shall a reading be below 2% of specified minimum sheen:
 1. Level A Sheen – Low Gloss reading of 30 to 40. 400 grit diamond finish.
 2. Level B Sheen – Medium Gloss reading of 41 to 55. 800 grit diamond finish.
 3. Level C Sheen – High Gloss reading of 56 or higher. 1500 grit or higher.
- C. For instructions on achieving gloss levels, refer to the appropriate sub-section of section 3.04 below.

3.5 POLISHING

- A. Use the grinding and polishing steps outlines below to achieve the desired level of cut and level of gloss. Please note that when grinding and polishing a cross hatch pattern should be used.

B. CUT LEVELS

1. LEVEL 1 CUT / A light cut that removes the surface paste exposing the fine aggregates near the surface. Also referred to as a cream finish. Note that a Level 1 cut will require high F-numbers to achieve, Min FF 50.
2. LEVEL 2 CUT / A slightly deeper cut the exposes the fine aggregates and begins to expose the coarse aggregates. Also referred to as a salt and pepper finish.
3. LEVEL 3 CUT / A deep cut that exposes the coarse aggregates in the surface.

C. LEVEL A-Low Gloss

1. GRIND/POLISH #1: 60/80 Grit Metal Bonded Diamonds.
2. Broom and vacuum the floor to remove all residual dust.
3. If required, apply ARDEX PC-R to fill areas in need of minor repair.
 - a. Locate areas and remove any loose decries from inside
 - b. Prepare all spall areas by cutting the edges of the spall to have a 90 degree edge
 - c. Chip, cut, or grind interior walls of spall to provide a clean surface free of contaminants that could act as a bond breaker.
 - d. Mix and apply ARDEX PC-R per manufacturer recommendations and overfill spalls slightly higher than surrounding surface.
 - e. Allow to dry 2-3 hours prior to proceeding with the next step.
4. GRIND/POLISH #2: #1 Grit High Performance Transitional Diamonds, Ceramic Bonded.
5. Broom and vacuum floor to remove dust.
6. Apply ARDEX PC 50 or DIAMATIC FLOR-SIL, per application instructions at a rate of 400 sq. feet per gallon.
7. Allow ARDEX PC 50 or DIAMATIC FLOR-SIL to dry for 1 hour before continuing onto the next step.
8. GRIND/HONING #3: 200 grit Resin Bonded Diamond.
9. GRIND/POLISHING #4: 400 grit Resin Bonded Diamond.
10. Broom and vacuum to remove dust.
11. MICROPOLISH/BURNISH #1: FLOR-GRIT[®] 200 Grit Diamond Impregnated Pad.
12. Apply PC-FINISH[™] Low Gloss per application instructions at a rate of 2,500 square feet per gallon.
13. Allow to dry a minimum of 15-30 minutes.
14. MICROPOLISH/BURNISH #2: FLOR-GRIT[®] 200 Grit Diamond Impregnated Pad.
15. Dry mop the floor clean to remove all debris.
16. Apply ARDEX PC FINISH Low Gloss or DIAMATIC FLOR-FINISH per application instructions at a rate of 3,000 square feet per gallon.
17. Allow to dry a minimum of 15-30 minutes.
18. MICROPOLISH/BURNISH #3: FLOR-GRIT[®] 200 Grit Diamond Impregnated Pad.

D. LEVEL B-Medium Gloss

1. GRIND/POLISH #1: 60/80 Grit Metal Bonded Diamonds.
2. Broom and vacuum the floor to remove all residual dust.
3. If required, apply ARDEX PC-R to fill areas in need of minor repair.
 - a. Locate areas and remove any loose decries from inside

- b. Prepare all spall areas by cutting the edges of the spall to have a 90 degree edge
 - c. Chip, cut, or grind interior walls of spall to provide a clean surface free of contaminants that could act as a bond breaker.
 - d. Mix and apply ARDEX PC-R per manufacturer recommendations and overfill spalls slightly higher than surrounding surface.
 - e. Allow to dry 2-3 hours prior to proceeding with the next step.
4. GRIND/POLISH #2: #1 Transitional Diamonds, Ceramic Bonded.
 - a. Broom and vacuum the floor to remove all residual dust.
 - b. GRIND/POLISH #3: 200 Grit Resin Bonded Diamonds.
 - c. Broom and vacuum the floor to remove all residual dust.
 - d. Apply ARDEX PC 50 or DIAMATIC FLOR- SIL per application instructions at a rate of 400 square feet per gallon (Actual rates may vary due to concrete porosity).
 - e. Allow ARDEX PC 50 or DIAMATIC FLOR- SIL, to dry before continuing on to the next step.
 5. GRIND/POLISH #4: 400 Resin Bonded Diamonds.
 - a. Broom and vacuum the floor to remove all residual dust.
 6. GRIND/POLISH #5: 800 Resin Bonded Diamonds.
 - a. Broom and vacuum the floor to remove all residual dust.
 7. MICROPOLISH/BURNISH #1: FLOR-GRIT 400 Diamond Impregnated Pad
 - a. Dry mop the floor clean to remove all debris.
 - b. Apply ARDEX PC FINISH Low Gloss or DIAMATIC FLOR-FINISH per application instructions at a rate of 2,500 square feet per gallon (Actual rates may vary due to concrete porosity).
 - c. Allow to dry a minimum of 15 minutes.
 8. MICROPOLISH/BURNISH #2: FLOR-GRIT 400 Diamond Impregnated Pad
 - a. Dry mop the floor clean to remove all debris.
 - b. Apply ARDEX PC FINISH Low Gloss or DIAMATIC FLOR-FINISH per application instructions at a rate of 3,000 square feet per gallon (Actual rates may vary due to concrete porosity).
 - c. Allow to dry a minimum of 15 minutes.
 9. MICROPOLISH/BURNISH #3: FLOR-GRIT 800 Diamond Impregnated Pad.
- E. LEVEL C-High Gloss
1. GRIND/POLISH #1: 60/80 Grit Metal Bonded Diamonds.
 - a. Broom and vacuum the floor to remove all residual dust.
 - b. Concrete Repair Installation, as necessary.
 - c. Locate areas and remove any loose decries from inside
 - d. Prepare all spall areas by cutting the edges of the spall to have a 90 degree edge
 - e. Chip, cut, or grind interior walls of spall to provide a clean surface free of contaminants that could act as a bond breaker.
 - f. Mix and apply ARDEX PC-R per manufacturer recommendations and overfill spalls slightly higher than surrounding surface.
 - g. Allow to dry 2-3 hours prior to proceeding with the next step.

2. GRIND/POLISH #2: #1 Transitional Diamonds, Ceramic Bonded.
 - a. Broom and vacuum the floor to remove all residual dust.
3. GRIND/POLISH #3: 200 Grit Resin Bonded Diamonds
 - a. Broom and vacuum the floor to remove all residual dust.
 - b. Apply ARDEX PC 50 or DIAMATIC FLOR- SIL per application instructions at a rate of 400 square feet per gallon (Actual rates may vary due to concrete porosity).
 - c. Allow ARDEX PC 50 or DIAMATIC FLOR- SIL to dry before continuing on to the next step.
4. GRIND/POLISH #4: 400 Resin Bonded Diamonds.
 - a. Broom and vacuum the floor to remove all residual dust.
5. GRIND/POLISH #5: 800 Resin Bonded Diamonds.
 - a. Broom and vacuum the floor to remove all residual dust.
6. GRIND/POLISH #6: 1500 Resin Bonded Diamonds.
 - a. Broom and vacuum the floor to remove all residual dust.
7. MICROPOLISH/BURNISH #1: FLOR-GRIT 800 Diamond Impregnated Pad
 - a. Dry mop the floor clean to remove all debris.
8. Apply ARDEX PC FINISH High Gloss or DIAMATIC FLOR-FINISH per application instructions at a rate of 2,500 square feet per gallon (Actual rates may vary due to concrete porosity).
 - a. Allow to dry a minimum of 15 minutes.
9. MICROPOLISH/BURNISH #2: FLOR-GRIT 1500 Diamond Impregnated Pad.
 - a. Dry mop the floor clean to remove all debris.
10. Apply ARDEX PC-FINISH High Gloss or DIAMATIC FLOR-FINISH per application instructions at a rate of 3,000 square feet per gallon (Actual rates may vary due to concrete porosity).
 - a. Allow to dry a minimum of 15 minutes.
11. MICROPOLISH/BURNISH #3: FLOR-GRIT 3000 Diamond Impregnated Pad.

3.6 EDGES

- A. Where desired, polished edge work of all areas shall be done with a 5" or 7" DIAMATIC Hand Held or Walk Behind polishing tool. The edge polishing process will match the corresponding steps outlined above for the desired gloss level, and each edge polishing step shall be done immediately after the matching main polishing step.
- B. NOTE: All grinding and polishing completed with grinder/polisher equipment connected to a dust collector.

3.7 ACCEPTANCE

- A. Remove all installation materials and any foreign materials resulting from the installation, from the site.
- B. Clean adjacent surfaces and materials.
- C. Perform post job walk to ensure that the ULTRAFLOOR® Polished Concrete System has been completed per the process spec.
- D. Take pictures of final product for documentation and submittal, if requested or required.

3.8 JOINT PREPARATION:

- A. All moving joints shall be filled with ARDEX ARDISEAL™ RAPID PLUS.
- B. All non-moving joints shall be filled with ARDEX ARDIBOND AP™ , ARDEX ARDIFIX™ or ARDEX ARDISEAL™ RAPID PLUS.
- C. For joints to be filled after the polish process, contact manufacturer for specific recommendations.

3.9 PROTECTION

- A. Protect the finish from spills and contamination by petroleum, oil, hydraulic fluid, acid and acidic detergents, paint and other liquid dripping from trades and equipment working over these substrates. If construction equipment must be used on these substrates, diaper all components that may drip fluids. Protect surface by installing the DIAMATIC PRIMO-COVER Protective Floor Covering, DIAMATIC ECONO-COVER Protective Floor Covering, or similar.
- B. **Avoid moisture for 72 hours after installation.** Don't permit standing water for this period or place any protective plastic sheeting, rubber matting, rugs or furniture that can prevent proper drying, thereby trapping moisture, which can result in a cloudy effect on the floor.
- C. Light pedestrian use only in the 24 hours after installation. Normal traffic recommended 7 days after completion of the ULTRAFLOOR® Concrete Topping System.

3.10 MAINTENANCE

- A. **IMPORTANT NOTICE:** Maintaining the ULTRAFLOOR® Polished Concrete System and adherence to a recommended cleaning schedule will help the floor hold its mechanically polished gloss longer and greatly reduce the absorption of spilled liquids. The treated concrete floor is easily maintained by regular cleaning with the Maintenance/Post Cleaning procedure, accompanied by Micro Polishing. Specific maintenance recommendations shall be provided by the certified ULTRAFLOOR® installer.
- B. Newly Installed ULTRAFLOOR® Polished Concrete System
 - 1. **Restrict water cleaning for 72 hours after installation of ULTRAFLOOR.** Use only a dry mop to clean. Avoid putting mats or covering treated surface to allow coating to fully cure out.
 - 2. **DO NOT USE** cleaners that are acidic or that have citrus (de-limonene) or Butyl compounds.

3.11 FIELD QUALITY CONTROL

- A. Test Reports: Provide field quality control sheen gloss reading and static coefficient of friction test results conducted as specified and recorded on floor plan diagram confirming compliance with specified performance criteria.

1. Static Coefficient of Friction: A reading of not less than 0.5 for level floor surfaces shall be achieved and documented, as determined by a certified NFSI walkway auditor using the NFSI 101-A quality control test.
2. Gloss readings should be obtained in accordance with ASTM E430, Standard Test Method for Measurement of Gloss of High-Gloss Surfaces by Abridged Goniophotometry.
 - a. Readings shall be taken not less than 10' (3 m) on center in field areas and within 1' (0.3 m) of floor area perimeters. In no case shall a reading be below 2% of the specified minimum sheen.

END OF SECTION