



ARDEX SD-M™

Designer Floor Finish™

Use over concrete, terrazzo and ceramic, quarry and porcelain tile

Provides a smooth, permanent, durable finish

Easy to mix and apply

Mixes with water only, no additives necessary

Outstanding coverage with excellent bond

Mold and mildew resistant

Use for interior floors only

Can be used to create a burnish-polished surface on indoor concrete

Can be used as a pinhole filler for polished concrete and ARDEX Polished Concrete Systems (APCS) applications

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Suitable Substrates

- Concrete (structurally sound)
- Absorbent terrazzo on concrete*¹
- Concrete substrates with electric radiant heat*²
- Non-porous (non-absorbent) cementitious terrazzo
- Ceramic, quarry or porcelain tiles
- Properly installed ARDEX moisture control systems on concrete

*¹ Must be sound, solid and well-bonded to underlying, structurally sound substrates. It is the responsibility of the installation contractor to ensure the substrate is rigid, well supported, properly anchored and free of undue flex and vibration.

*² Radiant heat must be turned off and allowed to cool to room temperature prior to proceeding with installation. Radiant heat must be left off until all installation steps are completed and the sealer or coating cures in accordance with manufacturer instructions. See specific instructions under Steps 4 and 5 below.

Suitable Applications

- All grade levels
- Interior applications only; dry areas Only
- Areas to receive foot and/or moderate, rubber-wheeled forklift traffic and similar*³
- Not for heavy-duty manufacturing, industrial floors or chemical environments requiring customized industrial toppings

*³ Excessive service conditions such as and similar to the following will cause gouging and indentations:

- Steel- or hard plastic-wheeled traffic
- Dragging heavy metal equipment, loaded pallets with protruding nails, heavy furniture and/or fixtures over the floor.

Jobsite Conditions

During installation and cure, substrate and ambient temperatures must be a minimum of 50 F / 10 C. If installing over an in-floor heating system, turn the heating system off 48 hours before, during and at least 48 hours after completion of the installation.

Step 1: Moisture Evaluation and Testing

This product is intended for interior, dry spaces. Hydrostatic pressure, plumbing leaks, flood factors and other sources of water infiltration must be identified and corrected prior to installation. This product is not a vapor barrier and will allow free passage of moisture vapor.

Test concrete relative humidity (RH) in accordance with ASTM F2170. Moisture control is required in the following circumstances:

- If the RH exceeds The limitations associated with the sealer or coating.
- If the RH exceeds 85%.

For high-moisture applications, especially in new construction, moisture control is recommended over on-ground slabs when the presence of an effective and intact underlying vapor retarder conforming with ASTM E1745 cannot be verified.

If a moisture control system will be installed, see "Moisture Control System Selection" section below. Otherwise, see the "Priming Method Selection" section below.

Moisture Control System Selection

- ARDEX MC RAPID

If moisture control will not be installed, choose the appropriate primer in accordance with the next section.

Priming Method Selection (select applications If moisture control will not be installed)

Priming is needed only for select applications as follows:

- ARDEX P 51™ Primer
- ARDEX EP 2000;
- ARDEX MC RAPID (primer application)

Substrate (Interior applications only; dry areas; All grade levels)	Primer
Prior to encapsulating heating system with ARDEX V 1300 or ARDEX K 40	ARDEX EP 2000; ARDEX MC RAPID (primer application)
Prior to applying ARDEX SD-M over encapsulated electric radiant heating system and/or Extremely absorbent concrete	ARDEX P 51 mixed 3 parts water to 1 part primer by volume
Non-porous (non-absorbent) cementitious terrazzo	ARDEX EP 2000
Standard absorbent (porous) Concrete; Aesthetically critical areas (Optional)* ⁴	ARDEX P 51 ARDEX EP 2000; ARDEX MC RAPID (primer application)

*⁴ While no primer is required over standard absorbent concrete, priming will help decrease the likelihood of pinholes and increase working time. ARDEX EP 2000 and ARDEX MC RAPID are highly reactive epoxies that bond tenaciously to the substrate to minimize cracking in ARDEX toppings. Follow mixing and application instructions in the appropriate technical data sheet, including sand-broadcast to refusal.

Step 2: Substrate Preparation (Proper Prep™)

For full details on Proper Prep, reference the following articles at ardexamericas.com/services/properprep:

- Article 1: Preparing Concrete for Bonded ARDEX or HENRY Applications
- Proper Prep Brochure

Mechanically clean substrate, if necessary by shot blasting or similar means. Do not use acid etching, adhesive removers, solvents or sweeping compounds, as these are bond breakers. Sanding is not an effective method to remove contaminants from concrete.

Substrate must be dry and alkali free. All substrates must be sound, solid and thoroughly clean of all bond-breaking contaminants, including but not limited to: frozen, overwatered or otherwise loose or weak material; dirt, dust, wax, grease, paints, form release and oils; all curing compounds and sealers; all existing patching and leveling materials; all adhesive residues.

Following preparation, thoroughly vacuum to remove all excess dirt and debris.

Handle and dispose of asbestos and other hazardous materials in accordance with prevailing regulations, which supersede the recommendations in this document.

Minimum Preparation

In all cases, substrate must be clean; additional prep may be needed, as follows:

Substrate	Minimum Preparation
Concrete to receive ARDEX MC RAPID or ARDEX EP 2000	Mechanically remove all adhesive residue, sealers, curing compounds, tiles, mortars and epoxy flooring systems down to clean, sound, solid concrete / terrazzo. Concrete and terrazzo substrates must be clean and prepared to a minimum CSP 3 / maximum CSP 5 (icri.org)
Concrete to receive ARDEX P 51	Substrate must be clean and absorbent (ASTM F3191)

Step 3: Treating Joints and Cracks

Under no circumstances should any product herein be installed over joints (including control joints, expansion joints, isolation joints, etc.) or moving cracks. Honor all joints and moving cracks.

All dormant cracks greater than a hairline (1/32" / 0.8 mm) that will not be honored must be pre-filled with ARDEX ARDIFIX™ Low Viscosity Rigid Polyurethane Crack and Joint Repair and sand broadcasted to refusal in strict accordance with the technical data sheet.

The filling of dormant cracks as described above is recommended to help prevent the cracks from showing through the topping. However, should movement occur, cracks will reappear.

ARDEX cannot be responsible for problems that arise from joints, existing cracks or new cracks that may develop after the system has been installed.

Step 4: Install Appropriate Moisture Control or Priming Course (If / as needed)

Products may need longer drying times with low surface temperatures and/or high ambient humidity. Do not proceed with subsequent steps before product has dried thoroughly.

Follow the instructions in the respective technical data sheet.

Step 5: Encapsulate Electric Radiant Heating Systems (as needed)

After priming with ARDEX EP 2000 or ARDEX MC RAPID (primer application) and sand broadcast, install either ARDEX V 1300 or ARDEX K 40 in accordance with the appropriate technical data sheet. To ensure complete encapsulation, install the selected ARDEX underlayment at a minimum 1/4" (6 mm) over the highest point in the floor. Refer to heating system manufacturer instructions for additional thickness requirements and encapsulation guidelines. Once the ARDEX underlayment is cured, prime with ARDEX P 51 mixed 3 parts water to 1 part primer by volume. Allow the ARDEX P 51 to cure a minimum of 30 minutes.

Step 6: Mixing and Application

Recommended Tools

Margin trowel; Appropriate notched trowel; Mixing Paddle; Mixing Container; appropriate measuring bucket; 1/2" (12 mm) heavy-duty drill (min. 650 rpm); Steel trowel

Water Ratio

- 2 quarts (1.9 L) clean water Per bag
- 2.5 parts powder: 1 part clean water by volume (standard, small-batch applications)
- 3.5 parts powder: 1 part clean water by volume (filling pop-outs and spalls up to 2" / 5 cm in diameter and 1/2" / 12 mm deep)

Thickness of Application

Minimum two coats, approximate thickness of 20 mils / 500 microns (about the thickness of a standard business card); not to exceed 1/16" (1.5 mm).

Pour the water in the mixing container first, and then add powder while mixing with the mixing paddle and a 1/2" (12 mm) heavy-duty drill (min. 650 rpm). Mix thoroughly for approximately 2 to 3 minutes to obtain a lump-free mix. Do not overwater! Additional water will weaken the compound and lower its strength.

Small batches may be mixed by hand. Use a margin trowel, and mix vigorously. Just prior to application on the substrate, the mixture should be stirred again to ensure a creamy, smooth, lump-free consistency.

As this product is installed in thin applications, the profile of the substrate can affect the flatness and smoothness of the product. The thickness of the application should be calculated based on the surface profile of the substrate and the specified tolerances of the subsequently installed finish surface.

Application

After mixing, apply the product to the substrate with the flat side of a steel trowel to obtain a solid mechanical bond before applying the desired thickness. Apply sufficient pressure to fill all defects and to feather the product onto the subfloor surface. Use the least amount possible to achieve desired smoothness. Apply 2 - 3 coats. Subsequent coats can be applied as soon as applied coats have hardened and will not be damaged by the trowel.

Use as a Pinhole Filler for Polished Concrete and APCS

After metal, transition and initial resin processing is complete, thoroughly vacuum the surface of the concrete or concrete topping. If pinholes are revealed, mix product in small batches as detailed above, and then use a metal trowel to pull the product tightly to the floor and fill voids. Use multiple swipes to fill voids thoroughly. The resulting layer should be an ultra-thin or "haze" coat to allow for easier processing. Resume processing with transitional ceramic tooling once product has hardened (typically 2 - 3 hours at 70°F / 21°C). Repeat at least once for best results; repeat further as needed to achieve desired effect. While appearance and color will vary, gray and white shades may be blended for best color matching.

Pot life (70°F / 21°C): 30 - 40 minutes. Jobsite conditions and temperature may affect pot life. If the material begins to harden within published pot life, retemper with a drill and mixing paddle. Do not add more water.

Step 7: Drying and Sealing / Coating

Product must be sealed or coated with a material suitable for the intended operating conditions of the installation environment. All dry times are calculated at 70°F (21°C). Drying time is a function of jobsite temperature and humidity conditions. Low substrate temperatures and/or high ambient humidity will extend the drying time. Adequate ventilation and heat will aid drying. Forced drying can dry the surface of the product prematurely and is not recommended.

Any coating at a thickness exceeding 20 mils:	3 - 5 days
Prior to processing as pinhole filler:	24 - 72 hours
Solvent-borne or 100% solids coating at a thickness up to 20 mils	24 hours
Waterborne sealer: $\leq$ 20 mils	When hardened and dried to a uniform tonality (Typically 2 - 3 hours)

Step 8: Care and Maintenance of ARDEX Surfaces

Maintaining an ARDEX Surface and adherence to a strict maintenance schedule will help maximize its performance, appearance and slip resistance and will reduce the absorption of spilled liquids. Always follow the care and maintenance guidelines associated with the sealer or guard product(s) used. For general care and maintenance guidelines for ARDEX Surfaces, contact the ARDEX Technical Service Department.

Notes

Intended for use by professional contractors who are trained in the application of this product and/or similar products. Not sold by ARDEX through home improvement centers. For information on ARDEX Academy trainings, visit: www.ardexamericas.com.

Never mix with cement or additives outside of our written recommendations. In accordance with industry standards, and to determine the suitability of the products for the intended use, always install an adequate number of properly located test areas including the sealer / coating. As finish materials vary, always contact and rely upon the sealer / coating manufacturer for specific directives, such as maximum allowable moisture content and intended end use of the product.

If the installation is not proceeding as expected: Contact the ARDEX Technical Service Department before proceeding further.

Observe the basic rules of concrete work, including the minimum surface and air temperatures detailed above. Install quickly if the substrate is warm, and follow the warm weather installation guidelines available on our website.

Dispose of packaging and residue in accordance with prevailing regulations. Do not flush material down drains. Do not reuse packaging.

Precautions

Carefully read and follow all precautions and warnings on the product label. For complete safety information, please refer to the Safety Data Sheet (SDS) available at: www.ardexamericas.com.

Technical Data According to Manufacturer Quality Standards

All data based on a partial, in-lab mix. Testing completed at 70°F / 21°C. Physical properties are typical values and not specifications.

Compressive Strength (ASTM C109/mod – Air cure only):	>5,000 psi (35.1 MPa; 351 kg/cm ²); 28 days
Coverage:	Per bag with 2-coat application: 80 - 100 sq. ft. (7.4 - 9.3 m ²) Dependent on surface profile, density and porosity.
Packaging:	10 lb. (4.5 kg) bag
Colors:	Gray and White
Storage:	Store in a cool, dry area. Do not leave units exposed to sun. Protect unused material by removing air from container and sealing tightly.
Shelf Life:	6 months, if unopened and properly stored
Warranty:	ARDEX Standard Limited Warranty applies. For full warranty details: ardexamericas.com/services/warranties .

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Latest version available at: www.ardexamericas.com.

Visit www.youtube.com/ARDEX101 to watch ARDEX product demonstration videos. For recommended installation tools, visit DTA USA at www.dtausagroup.com. For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App.



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