ARDEX MRF™

Moisture-Resistant, Rapid-Drying, Skimcoat Patching Underlayment

Provides a smooth surface over a variety of substrates

Engineered to withstand 100% RH; unaffected by moisture and water

Interior and exterior use

ARDEX WeatherProof Technology

Suitable for installation at temperatures as low as 40°F (5°C)

Easy to mix with water only; applies to a true featheredge

Install floor coverings in as little as 30 minutes

ARDEX Americas
400 Ardex Park Drive
Aliquippa, PA 15001 USA
888-512-7339
www.ardexamericas.com

ARDEX MRF™

Moisture-Resistant, Rapid-Drying, Skimcoat Patching Underlayment

Suitable Substrates

- Concrete (structurally sound)
- Absorbent terrazzo on concrete†
- Plywood subfloors (untreated); Interior Only
- Solid hardwood †, †††
- Gypsum ††
- Properly installed ARDEX moisture control systems on concrete: ARDEX MC™ RAPID
- Other approved, non-porous materials on concrete:†
  - Non-porous (non-absorbent) cementitious terrazzo
  - Ceramic, quarry or porcelain tiles
  - Epoxy Coatings
  - Epoxy terrazzo
  - Non-Water-Soluble Adhesive Residue on Concrete
  - Concrete treated with certain curing compounds (test area only; for full instructions, see ardexamericas.com/services/properprep)

†Must be sound, solid and well-bonded to underlying, structurally sound substrates.

Please note that a skim coat of a cementitious material applied over a non-porous surface may not create a porous bonding surface for the finish flooring and/or may not protect the finish flooring from migration of existing adhesive. Consult the flooring manufacturer for confirmation of any minimum thickness requirements for cementitious underlayments, as well as for any additional considerations, when installing over potentially non-porous surfaces.

††Please be advised that gypsum is inherently weak. This product will provide a solid bonding surface for new flooring, but it cannot correct the weakness of an underlying gypsum surface.

†††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.

Suitable Applications

- Areas to receive a suitable floor covering material, such as carpet, vinyl, ceramic, etc. Do not use as a wear surface. If a permanent wear surface is needed, use
- All grade levels
- Interior or Exterior
- Beneath ARDEX moisture control systems

Job Conditions

During installation and cure, substrate and ambient temperatures must be a minimum of 40° F / 5° C.

Step 1: Moisture Evaluation and Testing

While this product is unaffected by water, the surface of the concrete must be dry during application of the product.

This product is not a vapor barrier and will allow free passage of moisture vapor.

Follow the directives of the floor covering manufacturer regarding the maximum allowable substrate moisture content and test the substrate prior to installing this product.

Moisture control is required if the RH exceeds the most stringent of the following: 1) the limitations imposed by the flooring manufacturer; 2) the limitations imposed by the adhesive manufacturer.

Priming course if moisture control is required: ARDEX MC RAPID If moisture control is not required, See section entitled "Priming Method Selection" below.

Moisture Control System Selection

ARDEX MC RAPID: RH levels up to 100% on all grade levels.

If moisture control is not required, select applications require priming.

Priming Method Selection (select applications)

If a moisture control course will not be applied, priming is needed only for select applications as follows:

- ARDEX P 82 ™ Ultra Prime
- ARDEX P 4™ Pre-Mixed, Rapid-Drying, Multipurpose Primer
- ARDEX P 51™ Primer

Substrate (Dry areas only Interior applications only; All grade levels	**Priming Course**
Gypsum; Extremely absorbent concrete	ARDEX P 51 Double prime or ARDEX P 4
Epoxy Coatings	ARDEX P 82 or ARDEX P 4

Step 2: Substrate Preparation (Proper Prep™)

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

- Article 1.1: Preparing Concrete for ARDEX or HENRY Underlayments
- Article 1: Preparing Concrete for Bonded ARDEX or HENRY Applications
- Article 2: Preparing Wood for Bonded ARDEX Applications
- Proper Prep Brochure

If necessary, mechanically clean the substrate 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 free of excess moisture and alkali. All substrates must be sound, solid and thoroughly clean of all bond-breaking contaminants, including but not limited to: overwatered or otherwise loose or weak material; dirt, dust, wax, grease, paints and oils; unapproved curing compounds and sealers; unsuitable adhesive residues.

Minimum Preparation

Substrate must be clean; additional prep may be needed, as follows:

Substrate	Minimum Preparation
Non-Water-Soluble Adhesive Residue on Concrete	Non-water-soluble adhesive residue must be wet scraped to thin, well-bonded residue (rfci.com).
Substrate to receive ARDEX P 51	Mechanically remove all adhesive residue, sealers, curing compounds, tiles, mortars and epoxy coatings down to clean, sound, solid concrete / terrazzo Substrate must be clean and absorbent
Concrete to receive ARDEX MC RAPID	Mechanically remove all adhesive residue, sealers, curing compounds, tiles, mortars and epoxy coatings 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)
Plywood subfloors (untreated); Interior Only	Substrate must be clean

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.

Step 3: Treating Joints and Cracks

All moving joints, including expansion joints and isolation joints, as well as all moving cracks, must be honored up through the entire flooring system, including the finishing course. Under no circumstances should this product, the moisture control system, the selected primer or any other component of the flooring system be installed over these.

If an ARDEX moisture control system will be installed (see "Moisture Testing" section above): All dormant joints and 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.

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.

ARDEX MC RAPID Installation *(Priming course if moisture control is required)*

If moisture control is required, install the ARDEX moisture control system in accordance with the appropriate technical data sheet (www.ardexamericas.com/products). **See section entitled "Moisture Evaluation and Testing" above.**

Priming Course *(If moisture control is not required)*

If moisture control is not required, select applications require priming (See section entitled "Priming Method Selection" above).

Gypsum / Extremely absorbent concrete: ARDEX P 51 "Double prime"

Make an initial application of primer diluted with 3 parts water by volume. Let the initial application dry thoroughly (1 - 3 hours), and then install a second application of primer mixed 1:1 with water as detailed directly above.

Epoxy Coatings: ARDEX P 82

Follow the mixing instructions on the container, and apply with a short-nap or sponge paint roller, leaving a thin coat of primer. Do not leave any bare spots. Back roll with a dry roller to remove excess primer. ARDEX P 82 should be applied within 1 hour of mixing. Allow to dry to a thin, slightly tacky film (min. 3 hours, max. 24 hours).

Epoxy Coatings: ARDEX P 4

Apply a thin, even layer to the substrate using a short-nap roller, sponge paint roller or paintbrush. Allow the primer to dry to a thin, opaque, white film (min. 30 minutes; 70°F / 21°C). Once dry, there is no time limit before the subsequent installation may proceed. However, please note that the subsequent installation should proceed as soon as possible to avoid surface contamination or damage to the primed surface.

Step 5: Mixing and Application

Recommended Tools

Mixing Paddle; Mixing Container; 1/2" (12 mm) heavy-duty drill (min. 650 rpm); margin trowel; steel trowel; razor scraper; appropriate measuring bucket

Application Data

Water Ratio:	1 3/4 quarts (1.65 L) clean water Per bag 3.25 parts powder: 1 part clean water by volume (small batches)
Approximate Pot life:	15 - 20 minutes (70°F / 21°C)
Thickness of Application:	Small, well-defined areas (Standard absorbent (porous) Substrates Only): Unlimited
	Exterior: 1/4" (6 mm)
	All other cases (Interior): 1/2" (12 mm)

Manual

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.

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.

Jobsite conditions and temperature may affect pot life. If the material begins to harden within published pot life, retemper with a drill. **Do not add more water.**

Step 6: Drying Time and Installation of Flooring or ARDEX MC RAPID / ARDEX VR 98

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.

Wood flooring and high-performance adhesives (epoxies or urethanes)	16 hours
ARDEX MC RAPID or ARDEX VR 98	When fully cured (Minimum 2 hours)
All other cases	When hardened (Typically 30 minutes)

If the adhesive being used is drying more quickly over the underlayment than over adjacent concrete, prime the underlayment with ARDEX P 51 mixed 1:3 with water. Follow application and curing instructions in the ARDEX P 51 technical data sheet. The use of ARDEX P 51 will even out the open time of the adhesive without affecting flooring bond or long-term performance

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 finish flooring. As floor coverings vary, always contact and rely upon the floor covering manufacturer for specific directives, such as maximum allowable moisture content, adhesive selection 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

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

Coverage:	Per bag At 1/8" (3 mm): 28 sq. ft. (2.6 m^2) Per bag At 1/16" (1.5 mm): 56 sq. ft. (5.2 m^2) Per bag At Skim Coat: 200 - 250 sq. ft. (18.6 -23.2 m^2) Dependent on surface profile, density and porosity.
Drying Time:	See section entitled "Drying Time and Installation of Flooring" above.
VOC:	0
Packaging:	10 lb. (4.5 kg) bag
Storage:	Store in a cool, dry area. Do not leave units exposed to sun.
Shelf Life:	12 months, if unopened and properly stored
Warranty:	ARDEX L.P. Standard Limited Warranty applies. Also eligible for ARDEX SystemOne™ Warranty When used as a system. For full warranty details: ardexamericas.com/services/warranties.

Made in the USA.

 Content updated 2023-10-06. Supersedes all previous versions. 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.

Available on the iPhone App Store | ANDROID APP ON Google play | YouTube

ARDEX Americas
400 Ardex Park Drive
Aliquippa, PA 15001 USA
888-512-7339
www.ardexamericas.com