



ARDEX MRF™

Moisture-Resistant, Rapid-Drying, Skimcoat Patching Underlayment

Provides a smooth surface over a variety of substrates

Engineered to be fully resistant to unlimited moisture and water

Suitable for use under moisture control systems and moisture resistant adhesives and flooring

Interior and exterior use

ARDEX WeatherProof Technology

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

Non-sanded - install from a true featheredge up to 1/2" (12 mm)

Rapid-drying - install floor coverings in as little as 30 minutes

A blend of Portland and other hydraulic cements



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ARDEX MRF™

Moisture-Resistant, Rapid-Drying, Skimcoat Patching Underlayment

Description and Usage

ARDEX MRF™ Moisture-Resistant, Rapid-Drying, Skimcoat Patching Underlayment is a trowel-grade underlayment formulated from a blend of Portland cement and other hydraulic cements that provides a smooth surface prior to the installation of ARDEX MC™ Moisture Control Systems or moisture-resistant adhesives and flooring. ARDEX MRF is suitable for use over a variety of interior and exterior substrates and allows the installation of most floor coverings in as little as 30 minutes. ARDEX MRF does not require the use of a latex additive and can be installed over most substrates without the need for priming. ARDEX MRF is engineered around a rapid-drying matrix and is designed to be fully resistant to moisture and water.

Substrate Preparation

For all of the substrates listed below, acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means for cleaning the substrate. Substrate and ambient temperatures must be a minimum of 40°F (5°C) for the installation of ARDEX MRF. For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Technical Data Sheet at www.ardexamericas.com.

Concrete

All concrete substrates must be solid, structurally sound, thoroughly clean and free of oil, wax, grease, asphalt and latex compounds, curing compounds, sealers and any contaminant that might act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid concrete by shot blasting or similar. Over-watered, frozen or otherwise weak concrete surfaces must also be removed down to sound, solid concrete by mechanical methods. Sanding equipment is not an effective method to remove curing and sealing compounds.

Adhesive Residues on Concrete

For interior areas that do not have excessive moisture, ARDEX MRF can also be installed over non-water-soluble adhesive residue on concrete only. The adhesive must first be tested to make certain it is not water-soluble. Water-soluble adhesives must be removed mechanically down to clean concrete. The existing adhesive also must be tested to verify that it does not interact with the new flooring adhesive, and the new flooring must be tested to ensure it is not susceptible to bleed through of the existing adhesive. If adhesive interaction and/or migration are a concern, install an ARDEX self-leveling material such as ARDEX K 15® Premium Self-Leveling Underlayment.

Non-water-soluble adhesives should be prepared to a thin, well-bonded residue using the wet-scraping technique as recommended by the Resilient Floor Covering Institute (www.rfci.com) to remove thick areas and adhesive build-up. If the adhesive is not well-bonded to the concrete or is brittle, powdery or otherwise weak, it must be completely, mechanically removed down to clean, sound, solid concrete. Any existing patching materials below the adhesive must be removed completely.

Other Non-Porous Substrates

In interior areas that do not have excessive moisture, ARDEX MRF can also be applied over clean, sound and solidly bonded terrazzo, burnished concrete and epoxy coating systems.

In interior and exterior areas, ARDEX MRF can be applied over clean, sound and solidly bonded ceramic, quarry and porcelain tiles.

The substrate must be clean, including the complete removal of existing waxes and sealers, dust, dirt, debris and any other contaminant that may act as a bond breaker. Substrate preparation must be by mechanical means, such as shot blasting or similar.

Gypsum

For interior areas that do not have excessive moisture, ARDEX MRF can be installed over gypsum underlayments that are sound, solid, well-bonded and properly primed. For instructions on priming gypsum underlayments, please refer to the Priming section below. The gypsum must be thoroughly clean and free of dirt, debris, sealers and any contaminant that might act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid gypsum by shot blasting or similar.

Please be advised, however, that the fact remains that the substrate is gypsum, and therefore has inherent weakness. ARDEX MRF will provide a solid surface to which new flooring can bond, but cannot change the fact that a weak substrate lies below.

Wood

The interior wood subfloor must be constructed according to prevailing building codes, and must be solid and securely fixed to provide a rigid base free of undue flex. Any boards exhibiting movement must be refastened to create a sound surface. The surface of the wood must be clean and free of oil, grease, wax, dirt, varnish, shellac and any contaminant that might act as a bond breaker. If necessary, sand down to bare wood. A commercial drum sander can be used to sand large areas. Do not use solvents, strippers or cleaners. Vacuum all dust and debris. It is the responsibility of the installation contractor to ensure that the wood subfloor is thoroughly clean and properly anchored prior to the installation of any ARDEX material.

Some flooring manufacturers recommend that a finish-grade wood underlayment be installed over the existing wood subfloor. If necessary, ARDEX MRF can be used to smooth fasteners and/or joints in the wood underlayment. Please note that the wood underlayment must be suitable for the installation of the specific floor covering and must be installed in accordance with the wood underlayment manufacturer's recommendations.

Note on Asbestos-Containing Materials

Please note that when removing existing flooring, any asbestos-containing materials should be handled and disposed of in accordance with applicable federal, state and local regulations.

Recommended Tools

ARDEX T-2 Ring Mixing Paddle, mixing bucket, margin trowel, steel trowel, and a 1/2" (12 mm) heavy-duty drill (min. 650 rpm)

Priming

ARDEX MRF will bond to standard absorbent concrete and wood without the use of a primer, as well as to certain non-porous substrates, including burnished concrete, terrazzo and ceramic, quarry and porcelain tiles. Gypsum and epoxy coating systems must be primed as detailed below.

Note: ARDEX primers may need longer drying times with low surface temperatures and/or high ambient humidity. Do not install ARDEX MRF before the primer has dried thoroughly. The ARDEX primers below are for interior application only.

Gypsum: If the substrate is a gypsum underlayment that will not be removed, double priming of the gypsum is necessary to consolidate what may be a dusty surface prior to installing ARDEX MRF. Make an initial application of ARDEX P 51™ Primer mixed with 3 parts water, and apply using a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow thorough drying such that the film of primer does not re-emulsify in water (approximately 1 to 3 hours) before proceeding with the second application of ARDEX P 51 diluted 1:1 with water. Allow thorough drying to a clear, thin film (min. 3 hours, max. 24 hours).

Epoxy Coating Systems: Epoxy coating systems must be primed with ARDEX P 82™ Ultra Prime. 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 primer to dry to a thin, slightly tacky film (min. 3 hours, max. 24 hours). Follow the coverage instructions in the ARDEX P 82 technical data sheet.

Joints and Cracks

Under no circumstances should ARDEX MRF be installed over any moving joints or moving cracks. All existing expansion joints, isolation joints and construction joints, as well as all moving cracks, must be honored up through the underlayment and flooring.

Please be advised that while dormant control joints and dormant cracks may be filled with a trowel-grade material such as ARDEX MRF prior to installing finish flooring, this filling is not intended to act as a repair method that will eliminate the possibility of joints and cracks telegraphing.

ARDEX MRF is a non-structural material, and, therefore, will not restrain movement within the substrate. This means that while some dormant joints and dormant cracks may not telegraph up into the finish flooring, cracks will telegraph in any area that exhibits movement, such as an active crack, an expansion or isolation joint, or an area where dissimilar substrates meet. We know of no method to prevent this telegraphing from occurring.

Mixing and Application

For one 10 lb. (4.5 kg) bag of ARDEX MRF, use 1.75 quarts (1.65 L) of clean water. Pour the water in the mixing container first, and then add the ARDEX MRF. For best results, mix with an ARDEX T-2 Ring Mixing Paddle and a 1/2" (12 mm) heavy-duty drill (min. 650 rpm). Mechanical mixing will produce a creamier, smoother consistency without the need for additional water. **DO NOT OVERWATER!** Additional water will weaken the compound and lower its strength. To mix smaller quantities by hand, use 3.25 parts of powder to 1 part of water by volume. Use a margin trowel and mix vigorously for 2 - 3 minutes. Just prior to application on the substrate, the mixture should be stirred again to ensure a creamy, smooth, lump-free consistency. The pot life of ARDEX MRF is approximately 15 - 20 minutes at 70°F (21°C). If stiffening or surface skinning occurs within this time, remix before using. **Do not add more water.**

After mixing, apply the ARDEX MRF to the substrate with the flat side of a steel trowel (keying in) to obtain a solid mechanical bond before applying the desired thickness. Use sufficient pressure to fill all defects and to feather the product onto the subfloor surface.

Thickness of Application

For interior applications, ARDEX MRF can be installed from a true featheredge up to 1/2" (12 mm) over large areas. It can also be installed up to any thickness in small, well-defined areas, such as thresholds and birdbaths, as well as for height transitions. For exterior applications, ARDEX MRF can be installed at a skim coat over large areas and up to 1/4" (6 mm) in small, well-defined areas. There is no minimum thickness requirement for this product. Use the least amount possible to attain the desired smoothness. The thickness of the application should be calculated based on the surface profile of the substrate and the specified tolerances of the floor covering.

Wear Surface

ARDEX MRF is not to be used as a permanent wear surface, even if coated or sealed. ARDEX MRF must be covered by a suitable floor covering material, such as carpet, vinyl flooring, ceramic tile, etc. For resurfacing indoor concrete floors in warehouses, storage areas, hallways or other areas where a wear surface is required, use ARDEX SD-M™ Designer Floor Finish. For outdoor concrete surfaces, use ARDEX CD™ Concrete Dressing.

Installation of Flooring or ARDEX MC™ Moisture Control Systems

Standard floor coverings such as ceramic tile, VCT, sheet vinyl and carpet can be installed approximately 30 minutes after installing a skim coat application of ARDEX MRF (70°F / 21°C). If installing wood flooring, or if a high-performance adhesive such as an epoxy or urethane will be used, allow the ARDEX MRF to cure for 16 hours. All flooring adhesives that are compatible with concrete are compatible with ARDEX MRF. Make certain the patch is dry, and refer to the flooring manufacturer's specific recommendations for installing over cementitious underlayments.

It is important to note that many different types of adhesives are used to install floor coverings, and their absorbency into cementitious substrates can vary significantly. If it is found that the adhesive being used is drying more quickly over the ARDEX MRF than over adjacent concrete, we recommend that the surface of the underlayment be primed with ARDEX P 51 diluted 1:3 with water. Allow the primer to dry thoroughly (1 - 3 hours), and proceed with the installation of the adhesive. The use of the primer will even out the open time of the adhesive without affecting the bond or the long-term performance. Please note that this application is for interior areas that do not have excessive moisture.

ARDEX MRF requires no special curing procedures and is ready to receive ARDEX MC™ RAPID or ARDEX VR 98™ once it has fully cured (minimum 2 hours; 70°F / 21°C).

Standard floor coverings (such as ceramic tile, VCT, sheet vinyl and carpet)	Approx. 30 minutes after installing a skim coat*
Wood flooring or if a high-performance adhesive (such as an epoxy or urethane) will be used	16 hours*
ARDEX MC RAPID or ARDEX VR 98	When fully cured (min. 2 hours)

Drying time is a function of jobsite temperature and humidity conditions, as well as the installation thickness. 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 underlayment prematurely and is not recommended.

Notes

FOR PROFESSIONAL USE ONLY.

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

This product is not a vapor barrier, and it will allow free passage of moisture. Follow the directives of the floor covering manufacturer regarding the maximum allowable substrate moisture content and test the substrate prior to installing ARDEX MRF. Where substrate moisture exceeds the maximum allowed by the floor covering manufacturer, ARDEX recommends the use of ARDEX MC™ Moisture Control Systems. ARDEX MRF is not a waterproofing compound. Where waterproofing is needed, ARDEX recommends the use of ARDEX Waterproofing Systems. For further information, please refer to the ARDEX technical data sheets.

Always install an adequate number of properly located test areas, including the finish flooring, to determine the suitability of the products for the intended use. 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.

Never mix with cement or additives. Observe the basic rules of concrete work. Do not install below 40°F (5°C) surface and air temperatures. Install quickly if the substrate is warm, and follow warm weather instructions available from the ARDEX Technical Service Department.

To preserve its freshness, ARDEX MRF must be protected from air while not in use. Protect unused material by removing the air from the bag and sealing tightly. Open and reseal as necessary.

Dispose of packaging and residue in accordance with federal, state and local waste disposal regulations. Do not flush material down drains.

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 ARDEX Quality Standards

All data based on a mixing ratio of 3.25 parts powder to 1 part water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

Mixing Ratio:	1.75 quarts (1.65 L) of water per 10 lb. (4.5 kg) bag For smaller batches, use 3.25 parts powder to 1 part water by volume
Coverage:	28 sq. ft. per bag at 1/8" (2.6 sq. m at 3 mm) 56 sq. ft. per bag at 1/16" (5.2 sq. m at 1.5 mm) 200 - 250 sq. ft. (18.6 - 23.2 sq. m) per bag at a skim coat Coverage will vary depending on the texture of the surface being smoothed.
Install Flooring:	As little as 30 minutes; see Installation of Flooring section above.
VOC:	0
EN 12 529:	Suitable for castor wheels with finish flooring
Packaging:	10 lb. (4.5 kg) bag
Storage:	Store in a cool, dry area. Do not leave bags exposed to sun. Protect unused material by removing air from bag and sealing tightly.
Shelf life:	1 year, if unopened
Warranty:	ARDEX, L.P. Standard Limited Warranty applies. Also eligible for the ARDEX/HENRY® SystemOne™ Warranty when used in conjunction with select HENRY® Flooring Adhesives.

Made in the USA.

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IMPORTANT TECHNICAL UPDATES

Technical update effective 2018-04-27:

ARDEX Underlayments and Non-Porous Substrates

[CLICK HERE](#)

Technical update effective 2019-07-16:

ARDEX Underlayments and 99% RH

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Visit www.youtube.com/ARDEX101 to watch ARDEX Americas product videos.

For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App at the iTunes Store or Google Play.



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