



ARDEX DS 70™

Acoustic Mat

Use for sound reduction under tile, stone or wood floor coverings

Dual protection; sound reduction and crack isolation (up to 1/8" / 3 mm)

Can set tile and stone directly onto ARDEX DS 70 per ASTM C627

Ideal for use in condominiums, hotels and office buildings

Fast and easy installation

ARDEX DS 70 Systems achieve up to an Extra Heavy Commercial rating (Robinson Test) per ASTM C627

Use on above-grade wood or concrete substrates

SystemOne™

ARDEX ENGINEERED CEMENTS

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ARDEX DS 70™

Acoustic Mat

Description

ARDEX DS 70™ Acoustic Mat is a high-performance, flat, resilient, sound-control underlayment made from a formulation of high-quality, post-consumer-recycled, wear- and water-resistant rubber granules. It is used directly under hard surface flooring (tile, stone and wood) on above-grade concrete and wood joist substrates. ARDEX DS 70 is environmentally friendly as it is made from 92% recycled rubber. It can be installed quickly and easily using ARDEX AF 207™ pre-mixed adhesive. ARDEX DS 70 is available in a 2 mm or 5 mm thickness.

Recommended Tools

Utility knife, straight edge, 1/16" sq. notch trowel, 35-75 lb. roller

Preparation

Deliver all material to the jobsite in its original, unopened packaging under proper storage conditions.

It is the responsibility of the installation contractor to inspect the ARDEX DS 70 for visual defects and to verify that it is the correct thickness and type before beginning the installation.

Refer to the flooring manufacturer's specific recommendations.

Acclimate the installation area, setting material, ARDEX DS 70 and finish flooring in an enclosed building at a minimum of 65°F (18°C) for at least 48 hours before, during and for 48 hours after installation.

All substrates must be smooth and flat with a maximum variance of 1/4" in 10' (6 mm in 3 m) from the required plane per TCNA guidelines or as recommended by the flooring manufacturer (default to the most stringent requirement).

Fill all cracks, holes and low spots with ARDEX TL PATCH® Tile Leveler, Underlayment Patch and Skimcoat, ARDEX Liquid BackerBoard® Self-Leveling Underlayment for Interior Wood and Concrete Subfloors or ARDEX TL 1000™ Tile Leveler, Self-Leveling Underlayment.

The flooring system must be protected from excessive moisture. Always perform moisture and alkali tests for concrete on any grade level. Moisture test results should meet the flooring manufacturer's recommendations but should not exceed 85% RH as determined by the relative humidity test method (ASTM F2170). Alkali readings should be a maximum pH 10. Where substrate moisture and/or alkali exceeds the maximum allowed, please contact the ARDEX Technical Service Department.

Substrate Preparation

For each 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 50°F (10°C) for the installation of ARDEX products. Substrates must be dry during installation and cure. For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Brochure at www.ardexamericas.com.

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.

ABOVE-GRADE CONCRETE: All concrete substrates must be solid, structurally sound, thoroughly clean, thoroughly cured, dry and free of oil, wax, grease, asphalt, latex and gypsum 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 also must be cleaned down to sound, solid concrete by mechanical methods. Sanding equipment is not an effective method to remove contaminants from concrete.

ABOVE-GRADE WOOD: The 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. For tile installations, the subfloor must be constructed in accordance with ANSI L/360 standards. Any boards exhibiting movement must be re-nailed. 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. Open joints should be filled with ARDEX TL PATCH. 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.

Joints and Cracks

Under no circumstances should ARDEX DS 70 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.

As needed, dormant cracks and dormant control joints can be filled with ARDEX TL PATCH, following the instructions in the technical brochure.

However, please be advised that while dormant control joints and dormant cracks in the slab may be filled with ARDEX TL PATCH prior to installing ARDEX DS 70, this filling is not intended to act as a repair method that will eliminate the possibility of joints and cracks telegraphing into the finish flooring. ARDEX TL PATCH and ARDEX DS 70 are non-structural materials and are, therefore, unable to restrain movement within a concrete slab. This means that while some dormant joints and dormant cracks may not telegraph through the ARDEX materials and 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.

Installation

PERIMETER ISOLATION: It is essential to install the ARDEX DS 70 Perimeter Isolation Strip before placing and trimming the ARDEX DS 70 Acoustic Mat. Made from white polyethylene foam, the ARDEX DS 70 Perimeter Isolation Strip is a flat, resilient strip that is used to build a tub around the floor so that no hard surface (floor covering) touches any hard vertical surface (protrusion or wall).

Attach the ARDEX DS 70 Perimeter Isolation Strip to the perimeter wall of the entire subfloor as well as around the perimeter of any protrusions. Temporarily fasten the ARDEX DS 70 Perimeter Isolation Strip with masking tape, duct tape, carpet tape or spot gluing. The ARDEX DS 70 Perimeter Isolation Strip will later be trimmed flush with the new top layer of flooring above the ARDEX DS 70.

Note: Assume the walls you are butting against are not square. Using a chalk line, create a starting point for an edge of the material to follow.

ACOUSTIC MAT: ARDEX 8+9 should be used where waterproofing is required. Contact ARDEX Technical Service for instructions on the use of ARDEX 8+9.

Remove the shrink-wrap from the roll of ARDEX DS 70, and unroll it onto the floor. Shaking the material once as it is unrolled can help it to relax.

Place the ARDEX DS 70 so that it is perpendicular to the subsequent installation direction of the finish flooring. Trim the ends of each section as necessary in order to fit the surface area to be covered. Align the lengthwise edge of the material exactly with that of the neighboring section. Edges must contact but not overlap.

Fold the first drop lengthwise (half the width of the roll). Spread ARDEX AF 207 using a 1/16" sq. notch trowel.

Note: Temperature and humidity affect the open time of ARDEX AF 207. The installer should monitor on-site conditions and adjust open time accordingly.

Carefully lay the ARDEX DS 70 into the wet ARDEX AF 207. DO NOT let the material fall, as this will trap air beneath the material. Never leave adhesive ridges or puddles as they may telegraph through the material up into the finish flooring.

Note: Within 45 minutes of each drop, roll the ARDEX DS 70 with a 35 - 75 lb. roller to ensure proper transfer of adhesive. Overlap each pass of the roller by 50% of the previous pass to ensure that the floor is properly rolled.

Fold over second half of the first sheet and first half of the second sheet. Spread the adhesive. At seam area, spread adhesive at 90 degrees to seam to prevent excessive oozing up to the surface of the material.

Continue the process for each consecutive drop, working at a pace such that you always are folding material back into wet adhesive.

FINISH FLOORING: Install tile or stone materials with ARDEX X 77™ MICROTEC® Fiber Reinforced Thin Set Mortar, ARDEX X 78™ MICROTEC® Fiber Reinforced Semi-Pourable Thin Set Mortar, ARDEX X 5™ Thin Set Mortar, ARDEX X 32™ MICROTEC® Exterior Self-Drying Thin-To-Thick Bed Mortar or ARDEX FB 9 L™ Pourable ShearFlex® Thin Set Mortar applied directly to the ARDEX DS 70.

Install hardwood flooring using HENRY® 1171N SureLock™ Acrylic Urethane Wood Flooring Adhesive applied directly to the ARDEX DS 70.

Do not mechanically fasten any material through the ARDEX DS 70 as this will compromise the sound deadening performance of the ARDEX DS 70.

When the flooring installation is complete, trim any excess Perimeter Isolation Strip so that it is flush with the surface of the finished floor.

BASEBOARD: After the ARDEX DS 70 Perimeter Isolation Strip has been trimmed to finish floor height, install the baseboard. Affix the baseboard to the wall above the ARDEX DS 70 Perimeter Isolation Strip. The baseboard must not touch the finished floor. Seal the entire perimeter with a permanently flexible acoustical caulk.

Evaluation of Improvement with ARDEX DS 70 (Δ IIC)

Tested per ASTM E2179 with tile floor covering

5 mm: 19 dB

2 mm: 16 dB

ARDEX DS 70 Test Results (per ASTM E492, E90 and E1007)

ARDEX DS 70 2 mm						
Finish	Floor Structure	Ceiling	Gypsum	IIC	STC	Detail
Bamboo	8" Concrete Slab	No	No	53		Reinforced Slab
Bamboo	7" Concrete Slab	No	No	54	55	
Tile (Quarry)	5.5" Concrete Slab	Yes	No	51	56	5.5" thick slab + Epicore MSR floor pans
Wood	8" Concrete Slab	Yes	No	72	72	
Wood	8" Concrete Slab	No	No	54	53	85.6 PSF
ARDEX DS 70 5 mm						
Finish	Floor Structure	Ceiling	Gypsum	IIC	STC	Detail
Bamboo	6" Concrete Slab	No	No	51		Reinforced Slab
Bamboo	7" Concrete Slab	No	No	54	55	
Tile (Stone)	6" Concrete Slab	No	No	47		
Tile (Ceramic)	TJI	Yes	1"	50	60	
Tile (Ceramic)	Wood Truss	Yes	1"	53	63	
Tile (Quarry)	6" Concrete Slab	No	No	48		75 PSF Reinforced Slab
Tile (Quarry)	6" Concrete Slab	No	No	46		75 PSF Slab
Tile (Quarry)	8" Concrete Slab	No	No	42		85.6 PSF
Tile (Quarry)	8" Concrete Slab	No	No	50		Reinforced Slab
Tile (Quarry)	8" Concrete Slab	Yes	No	57	62	Reinforced Slab
Tile (Quarry)	Wood Joist	Yes	No	56		
Wood	Wood Joist	Yes	1"	51		

For more details on the above systems, please contact the ARDEX Technical Service Department.

Robinson Test Results (per ASTM C627)

In all cases, finish flooring is tile grouted with ARDEX FL™ Rapid Set, Flexible, Sanded Grout.

Substrate	Adhesive Used to Install ARDEX DS 70	Mortar Used to Install Tile	Rating
Wood	ARDEX AF 207	ARDEX X 5	Light Commercial
Concrete	ARDEX AF 207	ARDEX X 5	Moderate Commercial
Wood	ARDEX AF 207	ARDEX X 32	Light Commercial
Concrete	ARDEX AF 207	ARDEX X 32	Extra Heavy Commercial
Concrete	ARDEX 8+9	ARDEX X 32	Heavy Commercial
Concrete	ARDEX 8+9	ARDEX X 5	Extra Heavy Commercial

Warranty

ARDEX Engineered Cements Standard Limited Warranty. Also eligible for the ARDEX Americas 10-Year SystemOne™ Warranty when used in conjunction with select ARDEX products. Failure to follow written directions will void the warranty. For complete warranty details, please contact our Customer Service Center at 888-512-7339.

Notes

FOR PROFESSIONAL USE ONLY.

Shelf life is 5 years. Made in the USA.

Sizes Available:

2 mm Acoustic Mat - 48" wide x 75' long
(1.2 m wide x 22.9 m long) roll

5 mm Acoustic Mat - 48" wide x 30' long
(1.2 m wide x 9.1 m long) roll

6 mm Perimeter Isolation Strip - 2 1/2" wide by 50' long
(64 mm wide by 15.2 m long) roll

Technical Data According to ARDEX Quality Standards

Physical properties are typical values and not specifications.

Property and Test Method (as applicable)	2 mm	5 mm	Isolation Strip
Packaging	48' (1.2 m) wide x 75' (22.9 m) long roll	48' (1.2 m) wide x 30' (9.1 m) long roll	2 1/2" (64 mm) wide x 50' (15.24 m) long rolls
Min. density (ASTM D297)	45 pcf (0.72 g/cm ³)	45 pcf (0.72 g/cm ³)	45 pcf (0.72 g/cm ³)
Min. tensile strength (ASTM D412, Die C)	80 psi (6 kg/cm ²)	80 psi (6 kg/cm ²)	80 psi (6 kg/cm ²)
Min. elongation (ASTM D412, Die C)	50%	50%	50%
Min. tear strength (ASTM D624, Die C)	30 ppi (5.4 kg/cm)	30 ppi (5.4 kg/cm)	30 ppi (5.4 kg/cm)
Compression at 100 psi (7 kg/cm ²) (ASTM F36)	20-30%	20-30%	20-30%
Min. recovery at 100 psi (7 kg/cm ²) (ASTM F36)	85%	85%	85%
Shore A hardness (ASTM D2240)	40	40	40
Max. flexibility (ASTM F147)	1 factor	1 factor	1 factor
Max. compression set B (25% deflection / 158°F (70°C) / 22 hrs / ASTM D395)	40%	40%	40%
Coefficient of friction (ASTM D1894)	1.2	1.2	1.2

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Updated 01-09-2014. Supercedes all previous versions. Check
www.ardexamericas.com for updates.

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For easy-to-use ARDEX Product Calculators and
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App at the iTunes Store or Google play.



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