



ARDEX S 1-K™

One-Component Waterproofing and Crack Isolation Membrane

Flexible, topside waterproofing for interior floors and walls

Very easy-to-apply, 2-coat system; paint roller or brush

Easy to install with a paint roller or brush

Use for bathrooms, showers and other wet areas prior to the installation of tile

Highly workable consistency; minimal drips and splatters

Crack isolation up to 1/8" (3 mm)

Bonds to a wide range of substrates



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ARDEX S 1-K™

One-Component Waterproofing and Crack Isolation Membrane

Description

ARDEX S 1-K™ One-Component Waterproofing and Crack Isolation Membrane is an easy-to-use, single-component, load-bearing waterproofing compound that produces a flexible, positive-side waterproof coating for all common interior building substrates requiring protection from topside water exposure that could damage tile installations. It also provides an excellent bonding layer for ARDEX tile and stone setting materials. ARDEX S 1-K can also be used for crack isolation up to 1/8" (3 mm)*.

ARDEX S 1-K is for use over concrete, masonry finishes, existing tile, drywall, plaster, cementitious backerboards and plywood on interior floors and walls.

Substrate Preparation

All substrates must be structurally sound, solid, dry, thoroughly clean and free of oil, wax, grease, asphalt, latex and gypsum compounds, curing compounds, sealers and any contaminant that might act as a bond breaker. Plywood substrates must be APA-rated, Type 1 exterior-grade plywood. Refer to ANSI A108 AN-2 "General Requirements for Subsurfaces," the Tile Council of North America's "Handbook for Ceramic Tile Installation" and TTMAC for detailed information on surface preparation and guidelines for substrate construction. The plane of wall surfaces must be plumb and true. Floor surfaces must have minimal variation in the plane or slope, and sloped areas must have proper slope towards the drain(s).

Existing tile must be mechanically etched to produce a textured profile.

Should interior pre-leveling or substrate repair be required, use:

Product	Vertical	Horizontal
ARDEX AM 100™ Rapid Set Pre-Tile Smoothing and Ramping Mortar (only on cementitious substrates)	X	X
ARDEX Liquid BackerBoard® Self-Leveling Underlayment (for wood and concrete subfloors)		X
ARDEX TL 1000™ Self-Leveling Underlayment		X
ARDEX SKM™ Skimcoat Patch & Finishing Underlayment	X	X

Expansion joints must be provided over existing moving joints and cracks, and where substrate materials change composition or direction, per ANSI A108 AN-3.7 and TTMAC guidelines.

ARDEX S 1-K may be installed over highly absorbent substrates, including plaster, that are properly primed.**

Note on Curing Compounds

Test areas of ARDEX S 1-K can be installed and evaluated over concrete slabs that have been treated with either silicate or acrylic resin curing compounds. These compounds must be installed in strict accordance with the compound manufacturer's written recommendations. If a silicate type has been used, all residual salts must be removed.

Please be advised, however, that there are a number of curing compounds sold today that are wax- or petroleum-based emulsions. These are permanent bond breakers that must be removed completely prior to patching or leveling. Dissipating compounds must also be removed completely by mechanical means prior to installing any ARDEX material.

It is imperative to be able to determine the type of curing compound that was used before proceeding. Any curing compound that cannot be identified should be completely, mechanically removed.

Recommended Tools

Paint stirrer, putty knife, 3/8" nap paint roller and paintbrush

Application

DO NOT ADD WATER OR ADDITIVES!

Using a putty knife and/or paintbrush, apply a thick, even layer around floor or wall penetrations, in corners and floor/wall joints and around pipes. For corners and changes of plane, use standard width, 4 7/8" (120 mm) ARDEX SK MESH™ Reinforcement Fabric for Waterproofing and Crack Isolation. Without allowing the ARDEX S 1-K to dry, lay the ARDEX SK MESH into the fresh material, and key it in with the elbow of a roller.

Immediately apply the first coat of ARDEX S 1-K to the rest of the substrate using a paint roller. Coat the entire area to be waterproofed and allow to dry thoroughly (approximately 1 - 2 hours at 70°F / 21°C).

Once the first coat is completely dry, apply a second layer of ARDEX S 1-K to the substrate. Use a paint roller and work at a 90° angle to the first coat.

Tile can be installed over ARDEX S 1-K in accordance with ANSI A108.5 and once the final coat has dried (approximately 12 - 16 hours at 70°F / 21°C).

To achieve waterproofing capability, ARDEX S 1-K must be installed at a minimum dry film thickness of 20 mils (508 microns).

If flood testing is required, please note that the final coat of S 1-K must be fully cured (typically 12 - 24 hours; 70°F / 21°C and 50% RH).

Actual curing time depends on air and substrate temperature, substrate porosity and humidity. Higher temperatures and low air humidity will shorten drying time, while lower temperatures and high humidity will lengthen the drying time.

Crack Isolation

ARDEX S 1-K can be used as a crack isolation membrane in accordance with ANSI A118.12. ARDEX S 1-K will isolate minor, in-plane substrate cracking up to 1/16" (1.5 mm) when used without mesh and up to 1/8" (3 mm) when used with mesh.



If ARDEX SK MESH is to be used for crack isolation over a large, cracked area, first apply a layer of ARDEX S 1-K to the substrate using a 3/16" x 5/32" V-Notch trowel. Lay ARDEX SK MESH into the fresh ARDEX S 1-K, and key it in with the smooth side of a clean trowel or the elbow of a roller. Immediately apply another layer of ARDEX S 1-K over the entire surface. Special care should be taken to ensure no wrinkles are left in the installed mesh.

Please note that ARDEX S 1-K must be installed at a minimum dry film thickness of 20 mils (508 microns) to achieve crack isolation capability.

ANSI Test Results

*ANSI tests were conducted by IAPMO using ARDEX SK MESH in the corners, at the changes of plane and on the fields. To qualify for the ARDEX SystemOne Warranty, ARDEX S 1-K must, at a minimum, be installed with mesh reinforcement in the corners and at changes of plane.

Property	Test Method	ANSI Specification	Test Results
Fungus Resistance	A118.10 Section 4.1	No Growth	Pass
Seam Strength	A118.10 Section 4.2	> 8 lbs. / inch width	67 lbs. / inch width
Breaking Strength	A118.10 Section 4.3	> 170 psi (12 kg / cm ²)	1,094 psi
Dimensional Stability	A118.10 Section 4.4	+/- 0.7%	0.00%
Waterproofness	A118.10 Section 4.5	No Water Penetration	Pass
Shear Bond Strength to Cement Mortar			
Shear Strength After Water Immersion (7 day)	A118.10 Section 5.4	> 50 psi (5 kg / cm ²)	66 psi
Four Week Shear Strength	A118.10 Section 5.5	> 50 psi (5 kg / cm ²)	139.5 psi
System Crack Resistance			
Standard Performance (without mesh)	A118.12 Section 5.4	> 1/16" and < 1/8"	Pass
High Performance (with mesh)	A118.12 Section 5.4	> 1/8"	Pass
Point Load	A118.12 Section 5.2	> 1000 lb.	3,025 lb.

Notes

FOR PROFESSIONAL USE ONLY.

**Highly absorbent substrates, such as plaster, must be properly primed with ARDEX P 51™ Primer, as follows:

1. Make an initial application of ARDEX P 51 mixed with 3 parts water, and apply using a soft push broom or paint roller. Do not leave any bare spots. Remove all puddles and excess primer.
2. Allow thorough drying such that the film of primer does not re-emulsify in water (approximately 1 - 3 hours) before proceeding with the second application of ARDEX P 51 diluted 1:1 with water.
3. Allow thorough drying to a clear, thin film (min. 3 hours, max. 24 hours).

All tools should be cleaned with water immediately after use.

ARDEX S 1-K is for use in interior residential and light commercial applications, such as hotel bathrooms and showers. For other waterproofing applications, please refer to the ARDEX technical data sheets for ARDEX 8+9 and/or ARDEX SK 175™ Waterproofing Membrane and Vapor Retarder for Tile & Stone Installations.

Not for use in submerged applications, including swimming pools, or exterior applications.

As always, ARDEX recommends the installation of test areas to confirm the suitability of the product for the intended use.

Install at surfaces temperatures between 50°F (10°C) and 85°F (29°C).

Store at temperatures between 40 and 90°F (5 - 32°C). Do not freeze.

Seal the container of any unused portion of ARDEX S 1-K to prevent it from drying out. 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

Physical properties are typical values and not specifications. All data based on recommended stirring instructions at 70°F (21°C).

- Mixing Ratio:** Single-component mix. Do not dilute or mix with additives.
- Coverage:** Approx. 195.5 sq. ft. (18 sq. m) per 3.5 gal. (13.25 L) unit, 2 coats over drywall
Approx. 56.75 sq. ft. (5.27 sq. m) per 1 gal. (3.78 L) unit, 2 coats over drywall
(Will vary with substrate surface profile, porosity and texture)
- Working Time:** Unlimited. Seal unused portion to prevent product from drying out.
- Drying Time:** First coat: 1 - 2 hours
Second coat: 12 - 16 hours
- Flood Test:** The final coat must be fully cured (approximately 12 - 24 hours, depending on site conditions).
- VOC:** < 1 g/L, calculated SCAQMD Methods
- Packaging:** 3.5 gal. (13.25 L) pail
1 gal. (3.78 L) pail
- Storage:** Store in a cool, dry area. Do not expose container to sun. Keep from freezing.
- Shelf Life:** 1 year
- Warranty:** ARDEX L.P. Standard Limited Warranty applies. Also eligible for the ARDEX SystemOne™ 10-Year Limited Warranty when used in conjunction with select ARDEX mortars and grouts.

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IMPORTANT TECHNICAL UPDATES

Technical update effective June 28, 2018:
ARDEX Tile Mortar Thicknesses over Membranes

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