ARDEX SD-P®

Self-Drying, Trowelable Concrete Underlayment

A blend of Portland cement and other hydraulic cements
Provides a smooth surface prior to floor covering installation
Ideal for ramping, patching large areas and screeding
Fluid consistency for ease of application
Ready for floor covering in as little as 90 minutes
Install neat up to 1" (25.4 mm) and up to 3" (7.6 cm) with aggregate
Mixes with water only - no latex additive necessary
No primer required over concrete
Exceptional bond strength
Use for interior floors only

systemONE warranty

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Description and Usage

ARDEX SD-P® Self-Drying, Trowelable Concrete Underlayment is formulated with a special blend of Portland cement, other hydraulic cements and polymers. It is a self-drying, fast setting, trowelable patch for smoothing and repairing concrete floors, ramps and stairways, as well as non-porous substrates such as terrazzo, ceramic and quarry tile, prior to the installation of floor covering. When installed over standard absorbent concrete, no priming is required. Over non-porous substrates, the use of ARDEX P 82™ Ultra Prime ensures a permanent repair.

Using advanced cement chemistry with a self-drying matrix, ARDEX SD-P reaches a compressive strength of 4,200 psi. ARDEX SD-P sets quickly so that a smooth, steel-troweled surface can be readily obtained. The finished surface hardens rapidly, permitting the installation of most common floor coverings to proceed in approximately 90 minutes.

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 50°F (10°C) for the installation of ARDEX products. 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, gypsum 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 cleaned down to sound, solid concrete by mechanical methods. Sanding equipment is not an effective method to remove curing and sealing compounds.

***Note on curing compounds:** Test areas of ARDEX SD-P 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. For instructions on priming concrete with acceptable curing compounds, please refer to the Priming section of this technical data sheet.

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.

Other Non-Porous Substrates: ARDEX SD-P can also be applied over other clean, sound and solidly bonded non-porous substrates, including terrazzo, burnished concrete, epoxy coating systems, and 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. Where required, substrate preparation must be by mechanical means, such as shot blasting.

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, wood or magnesium float, steel trowel and a 1/2" (12 mm) heavy-duty drill (min. 650 rpm).

Priming

Note: ARDEX primers may need longer drying times with low surface temperatures and/or high ambient humidity. Do not install ARDEX SD-P before the primer has dried thoroughly.

Concrete: While no primer is required to obtain a solid bond when installing ARDEX SD-P over concrete, ARDEX P 51™ Primer can be used to prime a properly prepared concrete substrate prior to installing ARDEX SD-P. The use of ARDEX P 51 will improve the workability of the product, prevent it from drying out too fast, and help to ensure that any residual dust on the surface of the concrete will be bound up so that it will not interfere with the bond. For this application, mix ARDEX P 51 with an equal part of water, and prime the properly prepared concrete surface using a soft bristle push broom. Once the primer has dried (min. 3 hours, max. 24 hours), install the ARDEX SD-P as detailed below.

Non-Porous Substrates: Non-porous substrates such as burnished concrete, terrazzo, ceramic, quarry and porcelain tiles, epoxy coating systems and concrete treated with silicate compounds must be primed with ARDEX P 82. Follow the mixing instructions in the technical data sheet, and apply with a short-nap or sponge paint roller, leaving a thin coat of primer. Do not leave any bare spots. Brush off puddles and 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).

Note: If a suitable acrylic curing compound is used, test the surface for porosity. If the concrete is porous, no primer is needed. If it is non-porous, prime with ARDEX P 82.

Joints and Cracks

Under no circumstances should ARDEX SD-P 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 SD-P 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 SD-P is a non-structural material and is, therefore, unable to 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 40 lb. (18 kg) bag of ARDEX SD-P, use 4 quarts (3.8 L) of clean water. Pour the water in the mixing container first, and then add the ARDEX SD-P. 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 3.5 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 SD-P is approximately 60 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 SD-P to the substrate with a wood or magnesium float to obtain a solid mechanical bond. Allow the material to take a set (approx. 30 minutes), then finish the surface using a steel trowel. **Note:** Attempting to finish the surface with a steel trowel before the material has taken a firm set will result in blistering.

Thickness of Application

ARDEX SD-P can be installed up to 1" (25.4 mm) over large areas neat and up to 3" (7.6 cm) with the addition of proper aggregate. ARDEX SD-P can also be featheredged to match existing elevations. 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.

For areas with a thickness greater than 1" (25.4 mm), mix ARDEX SD-P with washed and well-graded 1/8" - 1/4" (3 - 6 mm) pea gravel. Mix the ARDEX SD-P with water first, and then add 1 part aggregate by volume, mixing until the aggregate is completely coated. Do not use sand. If the aggregate is wet, reduce the amount of water to avoid overwatering.

Wear Surface

ARDEX SD-P is not to be used as a permanent wear surface, even if coated or sealed. ARDEX SD-P 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 or ARDEX SD-T® Self-Drying, Self-Leveling Concrete Topping.

Installation of Flooring

As soon as the ARDEX SD-P can be worked on without damaging the surface (approx. 90 minutes), standard floor coverings such as ceramic tile, VCT, sheet vinyl and carpeting can be installed. If installing wood flooring, or, if high-performance adhesives will be used, such as epoxies or urethanes, please note that the ARDEX SD-P must first be allowed to cure for 16 hours (70°F / 21°C). All flooring adhesives that are compatible with concrete are compatible with ARDEX SD-P.

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.

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 SD-P than over adjacent concrete, the surface of the underlayment can be primed with ARDEX P 51 diluted 1:3 with water to even out the open time of the adhesive. Allow the primer to dry thoroughly (1 - 3 hours), and proceed with the installation of the adhesive and finish flooring. However, prior to proceeding, consult the adhesive and finish flooring manufacturers for specific recommendations and directives to ensure that neither the bond nor the long-term performance will be affected.

Notes

FOR PROFESSIONAL USE ONLY.

This product is intended for interior use over dry substrates only. Do not use in areas of constant water exposure or in areas exposed to permanent or intermittent substrate moisture, as this may jeopardize the performance of the underlayment and the floor covering. 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 SD-P.** Where substrate moisture exceeds the maximum allowed, ARDEX recommends the use of ARDEX MC™ Moisture Control 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 other than ARDEX-approved products. Observe the basic rules of concrete work. Do not install below 50°F (10°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 SD-P 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 3.5 parts powder to 1 part water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

Mixing Ratio:	4 quarts (3.8 L) of water per 40 lb. (18 kg) bag For smaller batches, use 3.5 parts powder to 1 part water by volume
Coverage:	25 sq. ft. per 40 lb. (18 kg) bag at 1/4" (2.3 sq. m at 6 mm) 50 sq. ft. per 40 lb. (18 kg) bag at 1/8" (4.6 sq. m at 3 mm) Coverage will vary depending on the texture of the surface being smoothed.
Initial Set (ASTM C191):	Approx. 30 minutes
Final Set (ASTM C191):	Approx. 90 minutes
Compressive Strength (ASTM C109/mod – Air cure only):	4,200 psi (294.0 kg/cm^2) at 28 days
Flexural Strength (ASTM C348):	1,000 psi (70.0 kg/cm^2) at 28 days
Install Flooring:	Install standard flooring as soon as the ARDEX SD-P can be worked on without damaging the surface, or approximately 90 minutes at 70˚F (21˚C). Allow ARDEX SD-P to cure for 16 hours (70˚F / 21˚C) before installing wood flooring or high-performance adhesives, such as epoxies or urethanes.
VOC:	0
Packaging:	40 lb. (18 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:	9 months, 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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Content updated 05-04-2020. Published 05-06-2020 . Supersedes all previous versions. Check www.ardexamericas.com for most recent version and for technical updates, which may supersede the information herein.

IMPORTANT TECHNICAL UPDATES

Technical update effective April 27, 2018:
ARDEX Underlayments and Non-Porous Substrates

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