ARDEX K 55™ RAPID
Premium High Flow, Self-Drying, Self-Leveling Underlayment

Self-Drying, Portland cement-based, microfiber reinforced

Use to level and smooth interior concrete, as well as certain other surfaces, such as terrazzo, ceramic and quarry tile, and epoxy coating systems

Formulated with High Flow Technology for ultra-thin applications

Can smooth floors at 1/8” or less

Installs from 1/16” to 1” thick, can be featheredged to meet existing elevations

Install floor coverings in as little as 2 hours

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ARDEX K 55™ RAPID

Premium High Flow, Self-Drying, Self-Leveling Underlayment

Description and Usage

ARDEX K 55™ RAPID is a premium self-drying, Portland cement-based, microfiber reinforced, self-leveling underlayment for leveling and smoothing interior concrete, as well as certain other surfaces, such as terrazzo, ceramic and quarry tile, and epoxy coating systems prior to the installation of finished flooring – on, above or below grade. It can also be installed over concrete treated with certain curing compounds (see below). Formulated with high flow properties, ARDEX K 55 RAPID remains fluid, even for applications requiring 1/8" or less, to provide a durable, flat, smooth floor surface with minimum labor and installation time. Designed specifically for the ultra fast leveling of floors, ARDEX K 55 RAPID can receive floor coverings in as little as two hours.

Substrate Preparation

Concrete: All concrete substrates must be solid, thoroughly clean and free of oil, wax, grease, asphalt, latex and gypsum compounds, adhesives, 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, scarifying or similar. Over-watered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means for cleaning the substrate. Sanding equipment is not an effective method to remove curing and sealing compounds. Substrate and ambient temperatures must be a minimum of 50°F (10°C) for the installation of ARDEX products.

***Notes on curing compounds:** Test areas of ARDEX K 55 RAPID can be installed and evaluated over concrete slabs that have been treated with acrylic resin curing compounds. These compounds must be installed in strict accordance with the compound manufacturer's written recommendations. For instructions on priming concrete with acceptable curing compounds, please refer to the Priming section of this brochure.

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 completely removed prior to patching or leveling. Dissipating compounds must also be completely removed 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.

For recommendations for other substrates, please contact the ARDEX Technical Service Department.

For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Brochure.

Recommended Tools

ARDEX T-1 Mixing Paddle, ARDEX T-10 Mixing Drum, ARDEX T-4 Spreader, ARDEX T-5 Smoother, ARDEX MB-6.375 Measuring Bucket [6 3/8 quarts (6 L) per 50 lb (22.7 kg) bag], and a 1/2" heavy-duty drill (12 mm, min. 650 rpm).

Priming

Standard absorbent concrete must be primed with ARDEX P 51™ PRIMER diluted 1:1 with water. Apply evenly with a soft bristled push broom. Do not use paint rollers, mops or spray equipment. Do not leave any bare spots. Brush off puddles and excess primer. Allow primer to dry to a clear, thin film (min. 3 hours, max. 24 hours).

Extremely absorbent concrete may require two applications of ARDEX P 51 to avoid the formation of bubbles and pinholes in the ARDEX K 55 RAPID. Make an initial application of ARDEX P 51 diluted with 3 parts water by volume. Let dry thoroughly (1 to 3 hours) and install a second application of ARDEX P 51 mixed 1:1 with water as stated above.

Note: If an approved acrylic curing compound is used, test the surface for porosity. If the concrete is porous, prime with ARDEX P 51. If it is non-porous, mechanically remove the curing compound such that a porous surface is achieved prior to priming with ARDEX P 51.

ARDEX primers may require longer drying time with low surface temperatures and/or high ambient humidity. Do not install ARDEX K 55 RAPID before the primer has dried thoroughly.

Moving Joints And Cracks

Under no circumstances should ARDEX K 55 RAPID be installed over any moving joints or cracks. All existing expansion joints, isolation joints and construction joints, as well as any moving cracks, must be honored up through the underlayment and flooring.

Mixing and Application – Manually

ARDEX K 55 RAPID is mixed two bags at a time. Mix each 50 lb (22.7 kg) bag with 6 3/8 quarts (6 L) of water. Pour the water in the mixing drum first, then add each bag of ARDEX K 55 RAPID while mixing with an ARDEX T-1 Paddle and a 1/2" heavy-duty drill (12 mm, min. 650 rpm). Mix thoroughly for approximately 2 to 3 minutes to obtain a lump-free mix. **Do not overwater!** Yellowish foam while mixing, or settling of the sand aggregate while placing, indicates overwatering.

ARDEX K 55 RAPID has a flow time of 10 minutes at 70°F (21°C). Pour the mix onto the floor and spread with the ARDEX T-4 Spreader. Immediately smooth the material with the ARDEX T-5 Smoother. Wear baseball or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX K 55 RAPID.

Mixing and Application – Pumping

ARDEX K 55 RAPID can be pumped using the ARDEX Levelcraft™ Automatic Mixing Pump. The Levelcraft Pump provides for high productivity and a smooth, consistent installation. The pump may be rented from an authorized ARDEX Distributor, and is supported by the ARDEX Technical Department.

Start the pump at a water setting of 210 gallons per hour, and then adjust to the minimum water reading that allows self-leveling properties. **Do not overwater!** Check the consistency of the product on the floor to ensure a uniform distribution of the sand aggregate at both the top surface and bottom of the pour. Conditions during installation, such as variations in water, powder, substrate and ambient temperature, may require that the water setting be adjusted during installation to avoid overwatering.

ARDEX K 55 RAPID has a flow time of 10 minutes at 70°F (21°C). Pump the mix onto the floor and spread with the ARDEX T-4 Spreader. Immediately smooth the material with the ARDEX T-5 Smoother. Wear baseball or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX K 55 RAPID. Contact the ARDEX Technical Service Department for complete pump installation instructions.

Thickness of Application

Formulated with high flow properties, ARDEX K 55 RAPID remains fluid even for applications requiring 1/8" or less, making it ideal for thin applications over large areas. ARDEX K 55 RAPID can be installed from 1/16" to 1" neat over large areas, and can also be featheredged to match existing elevations. Please note that for thin applications, the profile of the substrate can affect the flatness and smoothness of the ARDEX K 55 RAPID. 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 requiring a thickness greater than 1", ARDEX recommends using a suitable ARDEX self-leveling underlayment, such as ARDEX K 15® or ARDEX V 1200™.

Wear Surface

ARDEX K 55 RAPID is not to be used as a permanent wear surface, even if coated or sealed. ARDEX K 55 RAPID must be covered by a suitable floor covering material such as carpet, vinyl flooring, ceramic tile, etc. For resurfacing and leveling indoor concrete floors in warehouses, storage areas, hallways or other areas where a wear surface is required, use ARDEX SD-T®, ARDEX K 500™ or ARDEX K 301™.

Installation of Flooring

Floor coverings can be installed over ARDEX K 55 RAPID in as little as 2 hours at 70°F (21°C). Low substrate temperatures and/or high ambient humidity will extend the drying time.

Notes

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 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 K 55 RAPID.** Where substrate moisture exceeds the maximum allowed, ARDEX recommends the use of ARDEX Moisture Control Systems. For further information, please refer to the ARDEX Technical Brochures.

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.

ARDEX primers may require longer drying time with low surface temperatures and/or high ambient humidity. Do not install ARDEX K 55 RAPID before the primer has dried thoroughly.

Never mix with cement or additives. 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.

Precaution

ARDEX K 55 RAPID contains Portland cement and sand aggregate. Avoid eye and skin contact. Mix in a well-ventilated area and avoid breathing powder or dust. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on product label.

Technical Data According to ARDEX Quality Standards

All data based on a mixing ratio of 3 parts powder to 1 part water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

Mixing Ratio:	6 3/8 quarts (6 L) of water per 50 lb (22.7 kg) bag
Coverage:	50 sq. ft. (4.6 m^2) per bag at 1/8" (3 mm)
	25 sq. ft. (2.3 m^2) per bag at 1/4" (6 mm)
	Up to 100 sq. ft. (9.3 m^2) per bag at 1/16 (1.5 mm) (depending on surface profile)
Flow Time:	10 minutes
Initial Set: (ASTM C191)	Approx. 15 minutes
Final Set: (ASTM C191)	Approx. 60 minutes
Compressive: Strength (ASTM C109/mod – Aircure only)	5500 psi at 28 days
Flexural Strength: (ASTM C348)	1000 psi at 28 days
Walkable:	Approx. 2 hours
Install Flooring:	Approx. 2 hours
VOC:	0 g/L, calculated SCAQMD 1168
Packaging:	50 lb (22.7 kg) net weight bags
Storage:	Store in a cool dry area. Do not leave bags exposed to sun.
Shelf Life:	Six months if unopened
Warranty:	ARDEX Engineered Cements Standard Limited Warranty applies.

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