ARDEX K 530™

Decorative Concrete Topping

A blend of Portland cement and other hydraulic cements

Resurface indoor concrete and certain non-porous surfaces

Walk on in 2 - 3 hours, seal in as little as 24 hours

Polish in as little as 24 hours

Natural White color

For use as a binder for custom aggregate and colorants

Use for interior floors only

TESTED IN ACCORDANCE WITH ASTM C 1708

ARDEX Americas
400 Ardex Park Drive
Aliquippa, PA 15001 USA
724-203-5000
888-512-7339
www.ardexamericas.com

ARDEX K 530™

Decorative Concrete Topping

Description and Usage

ARDEX K 530™ is a self-leveling, decorative topping for fast-track resurfacing, smoothing or leveling of indoor concrete and certain non-porous surfaces. ARDEX K 530 can be installed up to 1" (25 mm) thick neat and up to 3" (7.5 cm) thick with the addition of approved decorative aggregates (see Technical Data section for minimum installation thicknesses by application). Use ARDEX K 530 in areas where a decorative floor is desired to provide a hard, flat, smooth surface that can be sealed. Also use over concrete and terrazzo substrates in areas that require a polished surface. Sealing or polishing can proceed in as little as 24 hours.

Substrate Preparation

All substrates must be solid, 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. 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. For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Technical Data Sheet at www.ardexamericas.com.

Concrete

Mechanically clean down to a sound, solid substrate by shot blasting or similar. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. The concrete surface must have a minimum ICRI Concrete Surface Profile of 3 (CSP #3). Any additional preparation required to achieve this must likewise be mechanical.

Non-Absorbent Substrates

Mechanically abrade non-absorbent substrates, such as terrazzo and ceramic and stone tiles, to create a bonding surface. Note that ARDEX K 530 can be used as a polished topping over concrete and terrazzo substrates only.

Joints and Moving Cracks

Under no circumstances should ARDEX K 530 be installed over any joints or any moving cracks. All existing expansion joints, isolation joints, construction joints and control joints (saw cuts), as well as all moving cracks, must be honored up through the topping by installing a flexible sealing compound specifically designed for use in moving joints, such as ARDEX ARDISEAL™ RAPID PLUS. Failure to do so may result in cracking and/or disbonding of the topping. Even the slightest amount of movement in a control joint will cause the ARDEX K 530 to show a hairline crack in a pattern reflective of the joint.

ARDEX cannot be responsible for problems that arise from joints, existing cracks or new cracks that may develop after the system has been installed.

Dormant Cracks

Before proceeding with the installation, all dormant cracks greater than 1/32" (0.7 mm) wide must be prefilled with a fully rigid, high-modulus, 100% solids material, such as ARDEX ARDIFIX™. Please note that the repair material must be sand broadcast to refusal while still fresh and allowed to cure fully prior to removing all excess sand and proceeding with the installation.

The filling of dormant cracks as described above is recommended to help prevent the cracks from showing through the topping. However, should movement occur, cracks will reappear.

Priming

In retail, hospitality and other areas where aesthetics are critical, for non-absorbent substrates and for all polishing applications, prime with ARDEX EP 2000™ Substrate Preparation Epoxy Primer. Follow the general recommendations for substrate preparation above, and apply the ARDEX EP 2000 with sand broadcast, carefully following the instructions in the ARDEX EP 2000 technical data sheet.

In areas where aesthetics are not critical (warehouses, mechanical rooms, etc.), standard absorbent concrete can be primed with ARDEX P 51™ Primer diluted 1:1 with water in accordance with the technical data sheet. Apply evenly with a soft 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 530. In such cases, make an initial application of ARDEX P 51 diluted with 3 parts by volume of water. Let dry thoroughly (1 to 3 hours) and install a second application of ARDEX P 51 mixed 1:1 with water as stated above.

Recommended Tools

ARDEX T-1 Mixing Paddle, ARDEX T-10 Mixing Drum, ARDEX T-4 Spreader, ARDEX T-5 Smoother, ARDEX MB-5.0 Measuring Bucket [5 quarts (4.73 L) per 50 lb. (22.7 kg) bag], 1/2" (12 mm) heavy-duty drill (min. 650 rpm) and baseball or soccer shoes with non-metallic cleats

Mixing and Application

MIXING MANUALLY

ARDEX K 530 is mixed two bags at a time. Mix each 50 lb. (22.7 kg) bag with 5 quarts (4.73 L) of clean water. Pour the water in the mixing drum first, and then add each bag of ARDEX K 530 while mixing with an ARDEX T-1 Paddle and a 1/2" (12 mm) heavy-duty drill (min. 650 rpm). Mix thoroughly for approximately 2 - 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.

When installing ARDEX K 530 in high-stress areas subject to rolling loads such as rubber-wheeled forklift traffic or similar use, the addition of ARDEX E 25™ Resilient Emulsion is required to increase the resiliency of the ARDEX K 530. Mix 2 quarts (1.9 L) of ARDEX E 25 with 4.5 quarts (4.25 L) of water for each bag of ARDEX K 530 following the mixing instructions above. Please note that, if ARDEX E 25 is used, the ARDEX K 530 must first cure 24 hours prior to receiving foot traffic and 48 hours prior to being polished.

Adding Integral Colorant

ARDEX K 530™ can be mixed with the addition of Integral Pigments. Pigments (Liquid or Powder) should be added to the water and mixed per the color manufacturer recommendation.

NOTE: Installer must conduct test areas using the colorant and ensure color consistency is maintained. ARDEX is not responsible for the final color of the surface.

Adding Decorative Aggregates

ARDEX K 530™ can be mixed with decorative aggregates that meet ASTM C33/C33M or C330/C330M standards. Broadcast Aggregate: Quartz, Granite, Marble, Limestone, River Gravel; Angular / Smooth / Flat; Size 00 up to 3/8". Pre-Consumer Glass (colored) or Mirror with a non-reactive coating; Angular, Smooth, Flat; Size 00 up to 3/8". All aggregates must be Clean; Washed / Dry and Dust Free. Aggregate loads should not exceed a ratio of 1:1 by weight. Minimum depth should be ½" or 3x the size of the largest aggregates value (3/8" aggregate = 1 1/2" minimum depth), whichever is greater.

NOTE: Installer must conduct a fully processed test area using the aggregate prior to a full installation. ARDEX is not responsible for the final color, dispersion of aggregate or final color of the finished surface.

Application Instructions

ARDEX K 530 has a flow time of 10 minutes at 70°F (21°C). Pour the mix onto the substrate, 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 530.

Thickness of Application

ARDEX K 530 can be installed from 1/4" (6 mm) up to 1" (25 mm) over large areas neat and up to 3" (7.5 cm) with the addition of proper aggregate. ARDEX K 530 also can be tapered to meet existing elevations. Install at a minimum thickness of 3/8" (9.5 mm) if being used as a polished topping. If installing with decorative aggregate the minimum thickness should be 3x the size of the aggregate or 1/2" (12.5 mm) whichever is greater.

For areas with thicknesses greater than 1" (2.5 cm), mix ARDEX K 530 with washed and well-graded 1/8" - 3/8" (3 - 9.5 mm) pea gravel. Please note that the aggregate size must not exceed 1/3 the depth of the pour. Mix the ARDEX K 530 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.

The addition of aggregate will diminish the workability of the product and may make it necessary to install a neat coat to obtain a smooth surface. Allow the initial application to dry for 48 hours, and then prime this layer with ARDEX EP 2000 with sand broadcast in accordance with the technical data sheet. Allow the primer to dry for a minimum of 16 hours, then broom sweep and vacuum the surface to remove all loose sand prior to installing the neat coat of ARDEX K 530.

Wear Surface

The surface of ARDEX K 530 always must be protected from oil, salt, water and surface wear by applying a suitable protection system, such as a concrete sealer or paint. ARDEX recommends the use of as sealer that is appropriate for the expected use of the floor surface. To protect the decorative nature of ARDEX K 530 ARDEX recommends the use of a film forming sealer.

For areas to receive heavier traffic, as well as areas such as restaurants and food courts, sealing should be done using an appropriate wear protection coating. As the performance of coating systems varies greatly, the installer is responsible for assessing the suitability of these coatings. If a waterborne sealer is to be applied at a thickness not-to-exceed a total of 20 mils (500 microns), the coating can be applied to the surface of the ARDEX K 530 after 24 hours at 70°F (21°C). When using a solvent-borne or 100% solids coating applied at a total thickness of 20 mils (500 microns) or less, the ARDEX K 530 must cure for a minimum of 48 hours at 70°F (21°C). When the total application thickness will exceed 20 mils (500 microns), the ARDEX K 530 must cure 7 days at 70°F (21°C), and the surface of the ARDEX K 530 must be shot blasted prior to the protection layer being installed.

Traffic can proceed as soon as the sealer / coating has cured in accordance with manufacturer recommendations. Drying time is a function of jobsite temperature and humidity conditions and 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.

If ARDEX K 530 is to receive a high-build epoxy, please contact the ARDEX Technical Service Department.

Cracking

ARDEX K 530 is formulated as a highly durable, nonstructural wear surface. As such, it is important to note that no one can predict with 100% accuracy the appearance of cracking in a nonstructural topping.

While there can be several causes for cracking, it must first be understood that the installation of thin layers of non-structural toppings are not capable of restraining movement in the structural slab, which could lead to reflective cracking. Conditions most likely to lead to crack telegraphing include deflection of a concrete slab; vibration of a concrete slab, such as that due to truck traffic and subways in metropolitan areas; swaying or "racking" of substrates in high rise buildings due to wind; existing cracks in the substrate; control joints or saw-cuts; expansion joints; abutment of dissimilar substrates; embedded metal ductwork and/or small cracks off of the corners of metal inserts, such as electrical boxes or vents in the floor. While priming with ARDEX EP 2000 is the best way to minimize the possibility of reflective cracking, cracks may telegraph up into the surface in any area that exhibits movement. We know of no method to prevent this telegraphing from occurring.

Additionally, certain jobsite conditions can lead to hairline cracking, also known as "map cracking" or "crazing." Hairline cracking, while aesthetically unpleasant, typically does not affect the overall performance of the topping. The most common cause of hairline cracking is excessively rapid moisture evaporation from the topping during cure, which tends to happen when ambient humidity in the space is very low and/or air rapidly moves over the surface of the topping. Hairline cracking can also occur when there is even slight movement or deflection in the existing substrate.

If cracking occurs, we recommend sounding the affected areas to ensure that the topping is well-bonded to the substrate. So long as the topping is well-bonded, its overall performance will not be affected.

Notes

FOR PROFESSIONAL USE ONLY.

ARDEX K 530 wear surfaces are intended for foot traffic, moderate, rubber-wheeled forklift traffic and similar uses. Excessive service conditions, such as steel- or hard plastic-wheeled traffic or dragging heavy metal equipment or loaded pallets with protruding nails over the floor, will cause gouging and indentations. ARDEX K 530 is not a resurfacing topping for heavy-duty manufacturing areas or industrial floors or for chemical environments requiring customized industrial toppings. As with any floor covering (wood, soft natural stone, marble, etc.), allowances must be made for scratches or abrasion that occur due to moving or sliding furniture or fixtures over the surface. Keeping the floor surface clean and free of dirt or other contaminants also will help to minimize scratching and abrasion due to foot traffic.

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 topping and sealer. This product is not a vapor barrier and will allow free passage of moisture. **Follow the directives of the sealer manufacturer regarding the maximum allowable substrate moisture content, and test the substrate prior to installing ARDEX K 530.** Where substrate moisture exceeds the maximum allowed, ARDEX recommends the use of an appropriate ARDEX MC™ Moisture Control System. For further information, please refer to the ARDEX technical data sheets.

ARDEX K 530 wear surfaces are not intended to be perfectly homogeneous in appearance. The physical act of spreading and smoothing will result in optical variations in the appearance of the floor even though it is very flat. The aesthetic appearance that is created is subject to possible technical and artistic tolerances. Variations in the overall finished appearance are an intended effect and should be expected.

Always install an adequate number of properly located test areas, including the wear protection system, to determine the suitability and aesthetic value of the products for the intended use. As coatings vary, always contact and rely upon the manufacturer for specific directives, such as maximum allowable moisture content, coating selection and intended end use of the product.

The finished floor does not achieve its published surface hardness until after 28 days.

While ARDEX K 530 can be installed over concrete that contains in-floor heating, ARDEX K 530 should not be used to encapsulate any heating system directly. If the concrete substrate has in-floor heating, it should be turned off, and the concrete should be allowed to cool, before installing ARDEX K 530.

ARDEX primers may need longer drying times with low surface temperatures and/or high ambient humidity. Do not install ARDEX K 530 before the primer has dried thoroughly.

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.

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 a partial, in-lab mix. Mixing and testing completed at 70°F / 21°C and in accordance with ASTM C1708, where applicable.

Mixing Ratio:	5 quarts (4.73 L) of water per 50 lb. (22.7 kg) bag
Coverage:	25 sq. ft. per bag at 1/4" (2.4 sq. m at 6 mm) 16.7 sq. ft. per bag at 3/8" (1.6 sq. m at 9.5 mm) 12.5 sq. ft. per bag at 1/2" (1.2 sq. m at 12 mm)
Flow time:	10 minutes
Compressive strength (ASTM C109/mod – air cure only):	6,000 psi (420 kg/cm^2) at 28 days
Flexural strength (ASTM C348):	1,200 psi (84 kg/cm^2) at 28 days
Walkable:	2 - 3 hours
Min. Cure Time prior to coating:	Waterborne: 24 hours Solvent-borne and 100% solids (less than 20 mils/0.5 mm): 48 hours High build polymer coating (greater than 20 mils/0.5 mm): 7 days
VOC:	0
Packaging:	50 lb. (22.7 kg) net weight bag
Storage:	Store in a cool, dry area. Do not leave bags exposed to sun.
Shelf life:	9 months, if unopened
Warranty:	ARDEX, L.P. Standard Limited Warranty applies.

Made in the USA.

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Updated 04-27-2021. Supersedes all previous versions. Check www.ardexamericas.com for most recent version and for technical updates, which may supersede the information herein.

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