



ARDEX PC-M™

Polished Concrete Micro-Topping

Use over indoor concrete

Provides a smooth, permanent, durable finish

Easy to mix and apply

Mixes with water only, no other additives necessary

Outstanding coverage with excellent bond

Mold and mildew resistant

Portland cement-based

Use for interior floors only

Can be used as pinhole filler for ARDEX PC-T™ Polished Concrete Topping

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ARDEX PC-M™ Polished Concrete

Description

ARDEX PC-M™ is a self-drying, trowelable topping for creating a polished surface on indoor concrete. A blend of Portland cement and other hydraulic cements, ARDEX PC-M can be used to provide a hard, flat, smooth surface for warehouses, utility rooms and light manufacturing. ARDEX PC-M is ideal for retail, hospitality and office buildings.

ARDEX PC-M can be installed at a minimum thickness of only 20 mils (500 microns / 0.020"), minimizing height transition issues, and can be polished in 24 - 72 hours.

Substrate Preparation

Concrete 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. If necessary, mechanically clean the floor down to sound, solid concrete by shot blasting, grinding 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. The resulting surface must have a minimum ICRI Concrete Surface Profile of 3 (CSP #3). Any additional preparation needed to achieve this must likewise be mechanical.

Substrate and ambient temperatures must be a minimum of 50°F (10°C) for the installation of ARDEX products. For further information, please refer to the ARDEX Substrate Preparation Brochure.

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

Priming

For Decorative Floors

For retail, hospitality and other areas where aesthetics are critical, 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 given in the ARDEX EP 2000 technical data sheet.

For Non-Aesthetic Applications

No primer is required. However, highly porous or absorbent

concrete can cause pinholes to develop. In this case, use ARDEX P 51™ Primer diluted with 3 parts water. 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). Applying ARDEX P 51 will also help to increase the working time for ARDEX PC-M.

Joints and Moving Cracks

Under no circumstances should ARDEX PC-M 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 any 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 PC-M 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.

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.

Reflective Cracking

ARDEX PC-M 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 non-structural 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. Areas most likely to telegraph include those with deflection of a concrete slab, vibration of a concrete slab in metropolitan areas due to truck traffic and subways, high rise buildings that sway or "rack" in the wind, existing cracks in the floor, control joints or saw-cuts, expansion joints and 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.

Micro-Topping

Mixing and Application

For one 10 lb (4.5 kg) bag of ARDEX PC-M, use 2 quarts (1.9 liters) of clean water. Pour the water in the mixing container first, and then add the ARDEX PC-M. For best results, mix with an ARDEX T-2 Ring Mixing Paddle and a 1/2" heavy-duty drill (12 mm, 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 2.5 parts powder to 1 part water by volume for the scratch and finish coat. For filling pop-outs and spalls up to 2" (5 cm) in diameter and 1/2" (12 mm) deep, use 3.5 parts powder to 1 part water by volume. Use a margin trowel and mix vigorously for 2 to 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 PC-M is approximately 30 to 40 minutes at 70°F (21°C). If surface skinning occurs within this time, remix before using. Do not add more water.

After mixing, apply a scratch coat of the mix to the substrate with the flat side of a steel trowel to obtain a solid mechanical bond. Apply sufficient pressure to fill all defects and to feather the product onto the subfloor surface. It is necessary to have a minimum of two coats of ARDEX PC-M with a total finished thickness of approximately 20 mils (500 microns, about the thickness of a standard business card). Use the least amount possible to attain the desired smoothness. The scratch coat, or base coat, should be applied to pre-smooth the surface, and the finish coat may be applied as soon as the trowel will not damage the base coat. A third application of ARDEX PC-M is optional depending on the desired finish and texture. This application is used primarily to achieve a very smooth, troweled finish. Total thickness should not exceed 1/16" (1.5 mm).

Use as Pinhole Filler on ARDEX PC-T™ Polished Concrete Topping

ARDEX PC-M is suitable to fill pinholes on ARDEX PC-T Polished Concrete Topping. After metal, transition and initial resin processing is complete, sweep and vacuum the surface of the ARDEX PC-T. This exposes sand aggregate and may reveal surface voids or "pinholes." Mix ARDEX PC-M in small batch ratios of 2.5 parts powder to 1 part water, and apply with a metal trowel. The ARDEX PC-M needs to be pulled tightly to the floor, filling the surface voids but leaving no more than an ultra-thin or haze coat of material on the entire surface of the ARDEX PC-T. (A thicker coat of ARDEX PC-M may be difficult to remove later in the process). Use multiple "swipes" with the trowel to apply the material thoroughly.

Once the ARDEX PC-M hardens sufficiently (typically 2-3 hours, 70°F/21°C) process the ARDEX PC-T with transitional ceramic tooling. The ultra-thin layer of ARDEX PC-M should

be able to be "cut" from the surface with normal resistance. The finished area should reveal areas of 100% fill but may reveal other areas that would require a second application. If needed, proceed with a second application of ARDEX PC-M as described above.

Typically, two applications of ARDEX PC-M are required for this process. However, it is up to the installer to apply as many applications of ARDEX PC-M as are needed to achieve a satisfactory end result. Allow the ARDEX PC-M to harden sufficiently between coats. Allow the final coat of ARDEX PC-M to harden sufficiently prior to proceeding with the next process step. As ARDEX PC-M Gray and White are slightly different shades than ARDEX PC-T Gray and White, ARDEX PC-M Gray and White may be blended for color matching.

Polishing and Maintenance

For instructions regarding the polishing, treatment and sealing of your polished concrete floor, please refer to the Formatted Specification for ARDEX APCS on the ARDEX PC-M product page at www.ardexamericas.com.

Allow ARDEX PC-M to cure 24-72 hours prior to polishing. While polishing, it is recommended that a NIOSH-approved dust mask and safety goggles be worn.

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 needed before processing the surface. Adequate ventilation and heat will aid drying.

Once installed, any finished floor surface requires routine cleaning and maintenance. Adherence to a regular cleaning and maintenance schedule will help the floor hold its gloss longer and greatly reduce its absorbency. The treated concrete floor can easily be maintained by following the procedures detailed at the APCS Ongoing Maintenance link on the ARDEX PC-M product page at www.ardexamericas.com.

ARDEX PC-M 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 PC-M is not a resurfacing topping for heavy-duty manufacturing 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.

Technical Data According to ARDEX Quality Standards

All data based on a mixing ratio of 2.5 parts powder to 1 part water by volume at 70°F (21°C)
Physical properties are typical values and not specifications.

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| Walkable: | 2 hours |
| Begin Processing: | 24 to 72 hours |
| Colors Available: | Gray and White |
| Packaging: | 10 lb (4.5 kg) bag net weight |
| Storage: | Store in a cool dry area. Do not expose bags to sun. Protect unused material by removing air from bag and sealing tightly. |
| VOC: | 0 g/L |
| Shelf Life: | 6 months |
| Warranty: | ARDEX Engineered Cements Standard Limited Warranty applies. |

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 topping and sealer. Test for moisture using the relative humidity method in accordance with ASTM F2170. Where substrate moisture is greater than 75% RH, install the ARDEX MC™ ULTRA Moisture Control System. For further information, please refer to the ARDEX technical data sheet.

Always install an adequate number of properly located test areas, including the processing, to determine the suitability and aesthetic value of the products for the intended use.

Low substrate temperatures and/or high ambient humidity require longer drying times for ARDEX primers. Do not install ARDEX PC-M before any primers used have 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 the warm weather instructions available from the ARDEX Technical Service Department.

To preserve its freshness, ARDEX PC-M 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.

Made in the USA.

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Updated 07-25-2014. Supersedes all previous versions.
Check www.ardexamericas.com for updates.

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For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App at the iTunes Store or Google Play.



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