



ARDEX PC-M™ Polished Concrete Micro-Topping

Use over concrete, terrazzo and existing tile, as well as over all ARDEX Underlayments and Toppings

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

ARDEX Engineered Cements
400 Ardex Park Drive
Aliquippa, PA 15001 USA
Tel: 724-203-5000
Toll Free: 888-512-7339
Fax: 724-203-5001
www.ardexamericas.com

ARDEX PC-M™ Polished Concrete

Description and Usage

ARDEX PC-M™ is a self-drying, Portland cement-based, trowelable topping for fast-track polishing, finishing or resurfacing of interior concrete and certain non-porous surfaces. Use ARDEX PC-M 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 (0.020"), minimizing height transition issues, and can be sealed in as little as 2 hours.

Substrate Preparation

Substrates must be solid, thoroughly clean and free of oil, wax, grease, asphalt, latex and gypsum compounds, curing and sealing compounds, and any contaminant that might act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid concrete by grinding, shot blasting or similar. Overwatered, frozen or otherwise weak concrete surfaces must always be cleaned down to sound, solid concrete by mechanical methods. Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means of cleaning the substrate. The use of 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. For further information, please refer to the ARDEX Substrate Preparation Brochure.

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

Standard absorbent concrete and ARDEX

Underlayments or Toppings: No primer is required. However, highly porous or absorbent surfaces 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 PRIMER will also help to increase the working time for ARDEX PC-M.

Non-porous substrates: Prime with P 82™ ULTRA PRIME. Follow mixing instructions on container 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. Allow primer to dry to a thin, slightly tacky film (min. 3 hours, max. 24 hours).

NOTE: For critical areas where reflective cracking is a concern, apply ARDEX EP 2000™ SUBSTRATE PREPARATION EPOXY PRIMER with sand broadcast, carefully following the instructions given in the ARDEX EP 2000 Technical Brochure.

Moving Joints and Cracks

Under no circumstances should ARDEX PC-M be installed over any moving joints or 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. 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.

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" (12 mm) heavy-duty drill (min 650 rpm). 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 of water by volume. **Do not overwater!** Use a margin trowel and mix vigorously for 2 to 3 minutes. Using mechanical mixing will produce a creamier, smoother consistency. Just prior to application on the substrate, the mixture should be stirred again to ensure a lump-free consistency. The pot life of ARDEX PC-M is approximately 30 to 40 minutes at 70°F (21°C). If hardening starts to occur within this time, remix before using.

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 20 mils (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 the initial 60/80 medium metal bond processing of ARDEX PC-T, which exposes sand aggregate

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and may reveal surface voids or 'pinholes', sweep and shop-vacuum area to reveal any imperfections for filling. 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.

Two applications of ARDEX PC-M are typically 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, blending ARDEX PC-M Gray and White may be utilized for color matching.

Wear Surface

The surface of ARDEX PC-M must always be protected from oil, salt, water and surface wear by applying a suitable protection system, such as a sealer. ARDEX recommends sealing ARDEX PC-M that will be exposed to normal foot traffic. Sealing can proceed as soon as the surface of the ARDEX PC-M hardens sufficiently to work on without damaging it (approx. 2 to 3 hours under standard conditions of 70°F (21°C) and 50% RH). Low ambient temperatures and/or high humidity can extend this time.

If a waterborne sealer is to be applied at a thickness not-to-exceed a total of 20 mils, the coating can be applied as soon as the surface of the ARDEX PC-M is hard (2 to 3 hours at 70°F/21°C). When using a solvent-borne or 100% solids coating applied at a total thickness of 20 mils or less, the ARDEX PC-M must cure for a minimum of 24 hours at 70°F (21°C). When the total application thickness will exceed 20 mils, the ARDEX PC-M must cure 3 to 5 days at 70°F (21°C) prior to installing the protection layer.

Once installed, any finished floor surface requires routine cleaning and maintenance.

ARDEX PC-M wear surfaces are intended for foot and moderate, rubber-wheeled forklift traffic and similar uses. Excessive service conditions, such as steel- or hard plastic-

wheeled traffic, or the dragging of 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, industrial floors, or for chemical environments requiring customized industrial toppings.

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 topping and sealer. This product is not a vapor barrier and will allow free passage of moisture. Where substrate moisture exceeds the maximum permitted, 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 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 coating manufacturer for specific directives such as maximum allowable moisture content, coating selection and intended end use of the product.

Low substrate temperatures and/or high ambient humidity require longer drying times for ARDEX primers. Do not install ARDEX PC-M before the primer has dried thoroughly.

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.

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 the warm weather instructions available from the ARDEX Technical Service Department.

Precautions

ARDEX PC-M contains Portland cement. 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 the product label. For complete safety information, please refer to the Material Safety Data Sheet, or visit our website at www.ardexamericas.com.

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.

Mixing Ratio:	2 quarts (1.9 L) of water to one 10 lb (4.5 kg) bag For smaller batches, use 2.5 parts powder to 1 part water by volume for the scratch and finish coat, or 3.5 parts powder to 1 part water for filling small spalls.
Coverage:	80 to 100 sq. ft. (7.4 to 9.2 m ²) per bag in 2 coats (Actual coverage may vary)
Initial Set (ASTM C191):	Approx. 45 minutes
Final Set (ASTM C191):	Approx. 90 minutes
Compressive Strength: ASTM C109/mod – Air cure	5000 psi (352 kg/cm ²) at 28 days
Flexural Strength (ASTM C348):	1200 psi (84 kg/cm ²) at 28 days
Walkable:	2 hours
Install Sealer:	Waterborne: When hard (approx. 2 hours) Solvent-borne or 100% solids epoxy (less than 20 mils): 24 hours High build polymer coating (greater than 20 mils): 3 to 5 days
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.
Shelf Life:	6 months
Warranty:	ARDEX Engineered Cements Standard Limited Warranty applies.

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ARDEX Engineered Cements
400 Ardex Park Drive
Aliquippa, PA 15001 USA
Tel: 724-203-5000
Toll Free: 888-512-7339
Fax: 724-203-5001
www.ardexamericas.com