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# ARDEX PC-T

## Commercial Polished Concrete

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Cement-Based, Self-Levelling Compound for Creating Polished Concrete Floors

Can be applied from 10mm up to 50mm without aggregate

Can be applied up to 130mm with aggregate

Walkable in 2 - 3 hours

Polish in as little as 24 hours

Designed for use with ARDEX Polished Concrete Systems

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# ARDEX PC-T

## Polished Concrete Topping

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### DESCRIPTION

ARDEX PC-T is a polished concrete topping that is a self-drying, self-levelling blend of cements for creating polished concrete floors. ARDEX PC-T installs from 10mm to 50mm without aggregate, and up to 130mm with the addition of aggregate. ARDEX PC-T hardens fast due to its unique self-drying formulation - it can be polished in as little as 24 hours. ARDEX PC-T is ideal in areas such as residential, retail stores, schools, airports, lobbies and all interiors where a polished concrete surface is desired.

### SUBSTRATE PREPARATION

All substrates must be solid, thoroughly cleaned and free of oil, wax, grease, asphalt, latex and gypsum compounds, curing compounds, sealers and any contaminant that might act as a bond breaker. Mechanically prepare the floor down to sound, solid concrete by shot blasting, grinding or similar. Over-watered or otherwise weak concrete surfaces must also be mechanically prepared down to sound, solid concrete. 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 substrate surface must have a minimum ICRI Concrete Surface Profile of 3 (CSP #3). Any additional preparation required to achieve this must also be mechanical.

Substrate and ambient temperatures must be a minimum of 10°C for the installation of ARDEX products.

For more detailed information on substrate preparation, please visit [www.ardexaustralia.com](http://www.ardexaustralia.com), or call our technical hotline 1300 788 780.

### JOINTS AND MOVING CRACKS

Under no circumstances should ARDEX PC-T 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 continued through the topping by installing a flexible sealing compound specifically designed for use in moving joints such as ARDEX RA 54. Failure to do so may result in cracking and/or debonding of the topping. Even the slightest amount of movement in a control joint will cause the ARDEX PC-T to show a hairline crack in a pattern 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 0.7mm wide must be pre-filled with a fully rigid, high-modulus, 100% solids material, or from the ARDEX concrete and crack repair range. Please note that the repair material must be sand broadcast 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.

### PRIMING

ARDEX Polished Concrete System requires priming with ARDEX EG 800F Commercial Epoxy System. Follow the general recommendations for substrate preparation above, and apply the ARDEX EG 800F Commercial Epoxy System with broadcast sand.

### MIXING AND APPLICATION

**MANUALLY:** ARDEX PC-T is mixed two bags at a time. Mix each 22.7kg bag with 4.7L of clean water. Pour the water in the mixing drum first, and then add each bag of ARDEX PC-T slowly while mixing with an ARDEX Electric Mixer. 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.

**PUMPING:** ARDEX PC-T may also be pumped using ARDEX approved mixing pumps. However, please contact ARDEX Technical Services for details.

ARDEX PC-T has a working time of 10 minutes at 21°C. Pour the mix onto the floor and spread. Immediately smooth the material with a T4 trowel. Wear non-metallic, cleated shoes when applying to avoid leaving marks in the liquid ARDEX PC-T.

As ARDEX PC-T uses several naturally occurring and mined raw materials, shade and/or other colour variations are to be expected. Therefore, for projects where more than one pallet of product will be used, it is strongly recommended that bags be blended and mixed together from multiple pallets during the installation process. This procedure will help to minimise the effects of shading and colour variation.

### THICKNESS OF APPLICATION

For areas with thickness greater than 50mm ARDEX also provide other solutions such as ARDEX A38 and ARDEX A48. Please contact Technical Services for more information.

### POLISHING AND MAINTENANCE

For instructions regarding the polishing, treatment and sealing of your polished concrete floor please refer to the Guide Specification for ARDEX Polished Concrete Systems on the category page on [www.ardexaustralia.com](http://www.ardexaustralia.com).

Allow ARDEX PC-T to cure 24 - 72 hours prior to polishing. 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.

ARDEX SD-M is recommended to fill pinholes on ARDEX PC-T. Mix ARDEX SD-M in small batch ratios of 2.5 parts powder to 1 part water, and apply with a metal trowel. The ARDEX SD-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 SD-M may be difficult to remove later in the process). Use multiple "swipes" with the trowel to apply the material thoroughly.

Once the ARDEX SD-M hardens sufficiently, process the ARDEX PC-T with transitional ceramic tooling.

The ultra-thin layer of ARDEX SD-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

Typically, two applications of ARDEX SD-M are required for this process. However, it is up to the installer to apply as many applications of ARDEX SD-M as are needed to achieve a satisfactory end result. Allow the ARDEX SD-M to harden sufficiently between

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coats. Allow the final coat of ARDEX SD-M to harden sufficiently prior to proceeding with the next process step. As ARDEX SD-M Gray and White are slightly different shades than ARDEX PC-T Gray and White, ARDEX SD-M Gray and White may be blended for color matching.

Once installation is complete, any finished floor surface requires routine cleaning and maintenance. Adherence to a regular cleaning and maintenance schedule will help the floor greatly reduce absorbency. The treated concrete floor can easily be maintained by following the procedures detailed within the ARDEX Maintenance Guide. ARDEX PC-T 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, dragging heavy metal equipment, or loaded pallets with protruding nails over the floor, will cause gouging and indentations. ARDEX PC-T is not a resurfacing topping for heavy-duty manufacturing or industrial floors, or for chemical environments requiring customised 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 will also help to minimise scratching and abrasion due to foot traffic.

### CRACKING

Whilst ARDEX PC-T is a highly durable wear surface it is non-structural and is subject to problems that occur with the subfloor. 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 due to truck traffic and railways, 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 EG 800F Commercial Epoxy System is the best way to minimize the possibility of minor surface reflective cracking - such as plastic shrinkage cracks - 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 (tap/knock) the affected areas to ensure that the topping is well-bonded to the substrate. If the topping is well-bonded, its overall performance will not be affected.

### 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 jeopardise the performance of the topping and finish.

ARDEX Polished Concrete System wear surfaces are not intended to be perfectly homogeneous in appearance. The physical act of

spreading and smoothing, along with the sanding process, will result in optical variations in the appearance of the floor even though it is very flat. The aesthetic appearance of the floor 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 processing, to determine the suitability and aesthetic value of the products for the intended use.

The finished floor achieves its published mechanical properties after 28 days.

While an ARDEX Polished Concrete System can be installed over concrete that contains in-floor heating, ARDEX PC-T 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 allowed to cool before installing ARDEX PC-T.

Low substrate temperatures and/or high ambient humidity require longer drying times for ARDEX primers. Do not install ARDEX PC-T 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 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.

### 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.ardexaustralia.com](http://www.ardexaustralia.com)

### CLIENT UNDERSTANDING

Each floor is handmade and unique so contractor's samples and visiting a pre-existing ARDEX PC-T floor are extremely important steps to gather expectations.

Slight pigment variation in the surface and smoothing blade marks are part of the character of ARDEX PC-T.

Even where the work has been preceded by prior sampling, objections to minor variations in the colour based on such differences cannot be accepted as long as the general character of the floor is preserved when the finished product is handed over to the customer.

The composition of ARDEX PC-T & the nature of grinding/finishing will produce very fine pitting that will be visible. This needs to be filled in via the grouting step or blooming can occur on the surface.

Only proficient ARDEX PC-T installers will have the necessary knowledge and experience in trowel technique, product mixing & polishing.

Anomalies may occur due to lighting, current environment (eg. variable temperatures) and or water quality (eg. excessive minerals or chemicals) from the main water supply. These may alter the appearance of the floor, which is beyond the contractor's control.

The premises must be made available to the contractor for as long as required and not be disrupted by other work. The presence of other trades in the working area is likely to result in contamination of prepared subfloors, contamination of the applied smoothing cements and potential damage to the floor before finishing.

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ARDEX PC-T is polished, densified and finished, however finishes need to be maintained well. Wipe up spills quickly and don't allow the floor to get excessively wet to avoid staining.

Avoid dyed rugs and pot plants on the floor, as the dye or water from these may bleed into the ARDEX PC-T.

Regular maintenance of the floor surface is recommended to ensure a clean, long lasting floor.

Any guarantee against damage to the surface or due to incorrect treatment/maintenance is excluded.

Avoid contact to the floor with harsh household chemicals such as those products containing bleach or acids.

To avoid damage to the surface, felt slides should be incorporated under any furniture similar to timber floorboards. Avoid moving / dragging objects with sharp edges across the floor as this will result in surface scratches. I have had explained to me and understand that:

ARDEX provide warranties on its products and systems when installed to recommendations. Workmanship is not warranted by ARDEX and we are not responsible for actions or omissions made by trained contractors.

Many natural effects become visible once the surface is polished. These may include: Water marks, trowel marks, marbling, mottled effects and random spotting amongst others.

Whilst consistent applicator techniques are applied, we cannot predict where the effects will show on the surface.

Every floor has its own unique appearance.

Any cracks present in the concrete slab could mirror through the compound.

If the concrete slab shrinks/moves and cracks after the installation, this could also mirror through the ARDEX PC-T finish. Cracking is a natural occurrence in concrete. ARDEX PC-T systems do not inhibit the concrete slab from cracking.

Insects and small bugs are attracted to the moisture in the wet cement. They may crawl into it. This is a natural anomaly. We are not responsible for pest control or problems related to the peculiarities of site fauna and flora.

After the job is completed we are not responsible for damage caused by other trades. ARDEX PC-T finishes should be protected by the builder/shopfitter using a geotech cloth or breathable protector (code BCP 161 from Protecta group 1300881232) then 3mm MDF board or similar. Do not use tape, plastic sheets or coreflute as hardness & marking issues can occur.

Particular conditions such as lighting, colour of the walls and extension of the area can also modify the perception of the colour.

Lighting conditions will affect the colour, always consider the following: Tungsten and Halogen lights are yellowish to orange. Fluorescent and Mercury vapour lights are greenish. Daylight sunlight is white to blue depending on cloud cover. Daylight lighting is intended to replicate 'white' sunlight. Whilst the eye-brain system corrects these colours to look 'white', the colour of things is changed, sometimes quite dramatically and especially under fluorescent type lights. The perception of colour can be effected where two different hues and shades are in close proximity especially contrasting colours.

I have read and understood the above information about the ARDEX PC-T

Print Name:

Signed:

Date:

### TECHNICAL DATA

All data based on a mixing ratio of 4 parts powder to 1 part water by volume at 21°C. Physical properties are typical values and not specifications.

<b>Mixing Ratio:</b>	4.7L of water per 22.7kg (50lb) bag
<b>Coverage (/bag):</b>	1.6m <sup>2</sup> at 10mm 1.2m <sup>2</sup> at 12mm
<b>Working Time:</b>	10 minutes
<b>Initial Set:</b>	Approx. 10 minutes
<b>Final Set:</b>	Approx. 45 minutes
<b>Compressive Strength:</b>	40 MPa at 28 days
<b>Flexural Strength:</b>	7 MPa at 28 days
<b>Walkable:</b>	2 to 3 hours
<b>Begin Processing:</b>	24 - 72 hours
<b>Colours:</b>	Light Grey, Grey and White
<b>VOC Content:</b>	0
<b>Packaging:</b>	22.7kg net weight
<b>Storage:</b>	Store in a cool, dry area. Do not leave bags exposed to sun or UV
<b>Shelf Life:</b>	6 months, if unopened

### DISCLAIMER

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable Australian Standard, our instructions and recommendations and only for the uses they are intended. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may effect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. You should make yourself familiar with them.

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### TOLL FREE TECHNICAL SERVICES:

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