

TECHNICAL BULLETIN – TB041

SUBFLOOR PREPARATION WITH PRIMING

FOR ARDEX UNDERLAYMENTS, TOPPINGS, FLOORING ADHESIVES, (WATERPROOF MEMBRANES AND CERAMIC TILES)

Date: Thursday, 24 May 2018

INTRODUCTION & SCOPE

The key to success when installing ARDEX products, is to achieve a good bond between the substrate and the underlayment or topping and also flooring adhesives (this includes membranes and tile adhesives as well). Proper preparation of the surface is the most important factor in achieving this bond.

Whatever topping or underlayment is used to level, smooth, or repair a substrate's surface, it will only be as strong as the surface to which it is bonded. The same applies to other materials applied to the surface such as flooring adhesives, membranes or tile adhesives. The surface, therefore, must be sound, clean and free of oil, grease, wax, dirt, asphalt, curing compounds, latex and gypsum compounds, dust, paint or any contaminant which might act as a bond breaker.

The methods required to properly prepare the subfloor vary with the type of substrate, its surface and condition. Several methods of preparing a substrate may be available, and some methods are used because they are cheaper, easier or faster, depending upon the size of the job. *However, taking short cuts in proper substrate preparation can be an invitation to installation problems and failures.*

This brochure is by no-means an all-inclusive guide, but is intended to give recommendations for many common substrate conditions and the proper preparation.

The new revisions to AS1884 (2012) make the following comments about surface preparation for flooring materials to be installed:

2.1.1 Information to be provided by flooring contractor

(b) Whether any repairs to the subfloor are required, and whether the surface of timber subfloors needs to be sanded.

(c) Whether the surface of the subfloor requires cleaning to remove existing floor covering, any deleterious materials such as grease, oil, paint curing or parting agents, or any surface treatment which could adversely affect adhesion.

3.1.1.5 Surface preparation

Before laying operations begin, materials such as grease, oil, paint, existing floor coverings and their adhesives, curing or parting agents, or any surface treatment, particularly oxides, markout paints, wax crayons which could adversely affect adhesion, discolouration or any other detrimental affect shall be removed from the subfloor via mechanical means.

3.1.2 New concrete subfloors

(c) Surface New concrete subfloors on which floor preparation materials, and the resilient covering are to be laid without underlay, shall be finished to a smooth and porous surface. Burnished concrete surfaces, waterproofing additives, curing compounds and other types of treatments or coatings will adversely affect the adhesion of the floor preparation and resilient covering to subfloor and shall be removed by mechanical treatment methods.

Concrete surface physical defects which also compromise adhesion of flooring systems, such as laitance or rain damage to the concrete surface, shall also be removed by mechanical preparation methods. All loose materials or dust present either as building debris, or residue from mechanical preparation shall be removed by vacuum cleaning. Surface cosmetic defects such as score marks, grooves or depressions shall also be removed either by mechanical preparation methods or the installation of an underlayment.

CONCRETE

Concrete floors must be solid and sound. Over-watered, frozen, rain damaged or otherwise weak concrete must be removed mechanically to provide a sound base. In addition, concrete should be evaluated for moisture and be free of oil, grease, wax, dirt, asphalt, curing compounds, latex and gypsum compounds, dust, paint or any contaminant which might act as a bond breaker.

New Concrete: There are two important reasons to avoid the installation of ARDEX products over concrete, which is less than 28 days old:

- 1) Drying and shrinkage cracks may occur as the concrete cures. Installing flooring ARDEX products over "green" concrete will result in the cracks telegraphing through the ARDEX



underlayment as they develop in the concrete. To avoid this, allow the concrete to cure a minimum of 28 days and repair any cracks before proceeding with the installation of the ARDEX material.

NOTE: Some selected tile adhesives can be applied after seven days.

- 2) ARDEX primers must be installed over a completely dry surface to assure proper bonding. Under many conditions, concrete may not be free of excess moisture before 28 days.

Caution: *ARDEX primers, underlayments, toppings and adhesives are not vapour barriers and will allow free passage of moisture.*

Power-trowelled (burnished) concrete/Hi-strength concrete greater than 35 MPa.

Burnished concrete finishes, Hi-strength concrete greater than 35 MPa including post tensioned, suspended concrete, off-form concrete etc, represent a finish that is extremely dense (non-porous) and with no surface profile. Adhesion to these concrete finishes without mechanical preparation is questionable. It is recommended to remove the glazed/dense surface finish to provide a roughened open porous matrix of the concrete.

Forced Drying.

If forced drying of the concrete slab is used, care must be taken that no oils are present in the air source as these can contaminate the drying surface.

Also, if entire rooms are heated by salamanders or other heaters using fossil fuels, the exhaust must be vented. This will prevent carbon dioxide from combining with calcium hydroxide in fresh concrete which can form a weak layer of calcium carbonate on the surface by a process known as carbonation. If carbonation does occur, the floor must be mechanically re-prepared.

Curing Compounds.

The vast majority of curing compounds are *bond breakers*, which will inhibit the ability of an underlayment or topping, flooring adhesive, membrane or tile adhesive to bond to the concrete substrate. They can also affect the drying curing times.

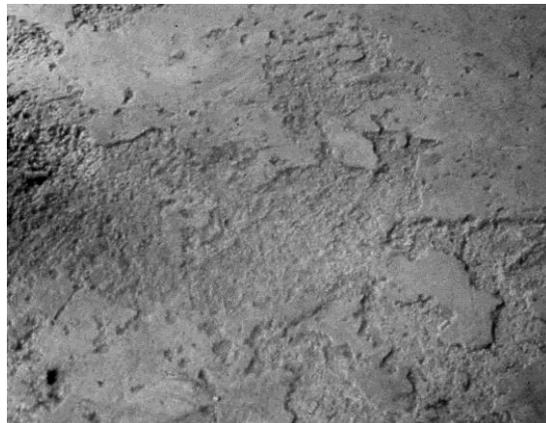
Regardless of the type of curing compound used, including dissipating curing compounds, these materials must be completely removed prior to proceeding with the installation of the flooring system.

NOTE: Where Ardex WPM300 is used as a curing compound, system can be applied over this material in accordance relevant product recommendations.

Acrylic Sealers.

Acrylic sealers can oxidize and flake off from exposure to ultraviolet light and air. Although acrylic sealers may not contain bond-breaking oils, waxes, resins or rubbers, a good bond cannot be guaranteed and complete removal is required.

Laitance, Weak Surface Areas, Frozen, Frost-Damaged or Overworked Concrete. These surfaces are unsuitable for flooring systems and any signs of spalling, scaling, delamination, crumbling or laitance must be removed down to solid, clean concrete. A hammer or heavy instrument should be used to sound out weak, hollow and unsound material.

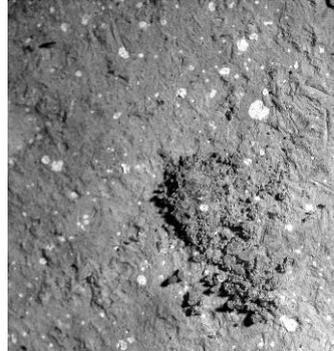


The concrete surface has a layer of laitance which needs to be removed back to the sound material underneath.

Contaminated Concrete.

All oil, grease, wax, dirt, chemicals, asphalt, latex and gypsum compounds, dust, paint, or any contaminant which might act as a bond breaker must be completely removed before installing a flooring system.

Failure to remove these contaminants is the most common cause of flooring materials de-bonding from the sub-surface.



Examples of contamination: The left picture shows site contamination including old toppings, and oily residues on a concrete surface. The right picture shows contamination found on the rear face of a sample of underlayment that had de-bonded from the subfloor due to lack of surface preparation.

Oil and Grease.

Cementitious flooring materials and membranes will not bond to a concrete substrate, which is contaminated with oil or grease. Trace amounts of oil will prevent a good bond and result in the topping de-bonding.

Chemical methods may be successful at removing oil if it has not penetrated too deeply, however the material used to remove the oil or grease may itself leave a contaminant behind. To remove any doubt, the substrate should be mechanically cleaned down to sound, solid, uncontaminated concrete.

Asphalt and Tar-Based Residues.

Although quite different in composition, both asphalt and coal tar-based residues on concrete substrates pose their own threats to the performance of flooring system. Roofing asphalt is often found on concrete roof decks upon which new floors are to be built. Tar products can also be found as a contaminant in these roof type renovation projects, as well as in the adhesive used on old wood block floors in warehouses and factories.

All asphalt and coal tar-based materials found on concrete substrates must be completely removed by mechanical means down to clean, sound, solid concrete prior to the installation of any flooring system.

Lightweight Concrete.

Structural lightweight, pre-cast light weight panel and lightweight screeds, vary greatly in density and compressive strength. Lightweight aggregate, vermiculite, gypsum, perlite and other lightweight fill materials are typically used in this category of insulating concrete.

Lightweight insulating concrete subfloors are typically used for sound or thermal insulation. These materials are not structural, have low compressive strengths, and exhibit soft weak surfaces. Whilst Ardex has recommendations for engineered AAC products such as CSR-Hebel Powerpanel™, other lightweight substrates are often not suitable for the installation of ARDEX underlayments or toppings, as they do not provide a solid, structural surface, which can serve as a substrate.

As the condition and composition of light weight concrete varies greatly, we always recommend the installation of test areas to determine the suitability of the installation for the intended use and to ensure that the lightweight concrete has cohesive integrity to remain bonded within itself.

Magnesium Oxychloride based toppings ('Magnesite')

These toppings which were typically installed as sound proofing and as a light weight underlayment, are totally unsuitable as a subfloor for ARDEX toppings, tile adhesives or liquid membranes. This

type of material must be completely removed prior to the application of any ARDEX product. For more information refer to Ardex Technical Bulletin TB078.

Old Adhesive residues.

This is a common source of surface contamination and *it is necessary to remove them entirely from the substrate* before a flooring system is installed. This can easily be achieved by mechanical means.

It is not uncommon for an installer to be encouraged to apply toppings over old adhesives. To provide a primer or system to adequately bond to most of these compounds isn't the problem, but you are then relying on the standard of the previous preparation, the bond strength of the old adhesive and of course the cohesive strength, in itself, of the adhesive or coating. The risk of the old adhesive (coating) lifting from the substrate or indeed splitting within itself can sometimes be very high depending on the type of floor covering, the environment and usage.

Certain products can have a high surface tension, putting enormous pressure on the old adhesive such as parquetry. Some adhesives, such as the old bituminous types (Black Jack) may be reactivated by the new adhesive and in time cause underlayment and subsequent floor covering to de-bond.

*Ardex Arditex NA can be applied over old residues if there is no option to remove the contaminants however, this application is **entirely dependent** on the condition of the bond of the old adhesive, and the quality of the workmanship. A minimum of 3mm of Arditex must be applied to minimise the risk of any new adhesives re-activating the old residues with the risk of the whole surface de-bonding. Refer to Ardex Technical Bulletin TB200 for specific advice on this application.*

In summary, the best course of action is to remove old adhesive residues. Refer to Ardex Technical Bulletin TB037 for specific examples relating to problems with old residues.

Rain damaged concrete.

Concrete which has been effected by rain prior to cure must be mechanically prepared back to the sound underlying material. The rain damage concrete is mechanically very weak and can de-bond under traffic loadings, and may be weak enough to fail when tensile strain from the drying topping is applied.

RECOMMENDED METHODS OF PREPARING CONCRETE SUBSTRATES

The best way to remove any contamination in a concrete substrate is by an approved mechanical method. Mechanical cleaning removes the contaminant and the concrete to which it is adhered leaving only a clean, sound and solid surface behind.

ARDEX recommends that all concrete substrate preparation proceeds using one or more of the following mechanical methods: shotblasting, scarifying, diamond grinding/shaving, sandblasting, scabbling (bush hammering) and chiselling.

Formally AS1884-2012 defines mechanical as,

1.3.15 Mechanical means

'Mechanical means' is the process of surface preparation performed by application of applied physical forces to the substrate surfaces to remove contamination. For the purposes of installations on concrete this refers to the use of diamond grinders, scarifiers and captive shot blasters. For smaller areas this can include chippers and nail gun type scabblers. When installations are to be performed on timber floors 'mechanical means' refers to floor sanders. Regardless of the means used the final process in a mechanical preparation is vacuum cleaning.

Initial treatment can include processes such as degreasing and high pressure water blasting to remove surface oils and grease, however these contaminants can penetrate deeper into the surface and shall be followed up by mechanical methods. Please note, when water blasting is used, the floor becomes 'wet' which either requires the concrete to dry again, or that a moisture barrier will be required.

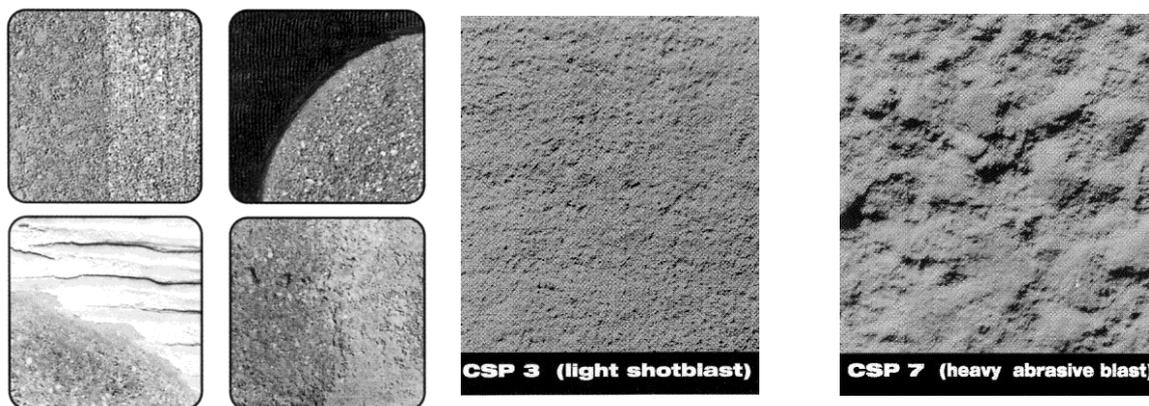
Mechanical abrasion methods such as scarifying, scabbling and chiselling are aggressive methods, which are recommended to remove unsound areas. Diamond grinding/shaving can also be effective but are slow for large areas. Sandblasting is an excellent method of cleaning weak surface areas, if environmental restrictions permit its use.

One of the most cost-effective methods of removing a wide variety of contaminants from a large area of concrete is to use shotblasting. Using different sizes of steel "shot", a shotblast machine can remove a variety of sealers, coatings, curing compounds and other contaminants quickly and effectively, leaving behind a surface which is ready to receive the specified underlayment or topping.



Removal must be deep enough to eliminate all penetrated contaminants. Suggested cleaning & preparation methods in line with the American publication, "International Concrete Repair Institute Guideline No. 310.R2-2013" (formerly No. 03732-1997 <https://www.icri.org/store/ViewProduct.aspx?id=5569335>.) will provide a surface profile of between CSP3 to CSP7 (CSP=concrete surface profile).

The objective of preparation is to produce an open porous concrete matrix suitable for the flooring system. Porosity can be checked by observing absorption of water droplets placed on the concrete surface. If the water spreads out and is absorbed the surface can be considered porous, but if it remains a bead the surface is non-porous and further preparation is required.



Typical examples of surfaces treated by diamond grinding.

The preferred profiles for Ardex underlayments with the minimum CSP3 on the left. The recommended maximum is CSP7, but can go to CSP9.

The following table gives approximate CSP ratings for different methods (from ICRI 312.R2 Table 7.2)

Surface preparation methods	Concrete Surface Profile									
	CSP 1	CSP 2	CSP 3	CSP 4	CSP 5	CSP 6	CSP 7	CSP 8	CSP 9	CSP 10
Detergent Scrubbing										
Low pressure water cleaning										
Grinding										
Acid etching										
Needle scaling										
Abrasive blasting										
Shotblasting										
High and Ultra pressure water jetting										
Scarifying										
Scabbling										
Handheld concrete breaker										

Green = preferred methods, Blue = other acceptable methods for *specific* purposes, Red = not recommended

METHODS TO AVOID

Acid Washing (Acid Etching).

This method is not recommended because it is difficult to control and to fully remove the residue and properly neutralise the acid. Further, the acid can penetrate into the porous concrete and chemically react with the cement, thus affecting the long-term integrity of the concrete. Acid washing will not satisfactorily remove grease and oil.

The only recommended usage for this method is to correct the pH of concrete where highly alkaline conditions may be present, or the surface has been treated with reactive silicates or silica sols (see also Ardex Technical Bulletin TB082).

Paint Solvents & Adhesive Removers and solvents.

All types of solvents should be avoided and their use will drive oil, grease and other contaminants further into the concrete. These contaminants can be released back to the surface at a later time. Physically removing oil-contaminated concrete is the only sure way to ensure a clean substrate.



Flammable and volatile solvents also carry risks associated with fires and possible chronic or acute toxic effects. They are commonly restricted on job sites due to OH&S Regulations and Trade Union safety rules.

Sweeping Compounds.

Sweeping compounds can leave an oily or waxy film on the surface of the concrete and their use can create a bond-breaking layer, which will result in a flooring system failure. Using a dry clean broom sweep and thoroughly vacuum the surface prior to placing any floor system.

CRACKS AND JOINTS

Crack Repair: All cracks in new and old concrete should be repaired to inhibit their ability to reflect or telegraph up into the surface of a bonded floor system. However, it is still possible that some cracks will reflect into the surface. In most cases, these are small, hairline cracks do not pose a threat to the performance of the underlayment, topping or floor covering to be installed.

Large **dormant** cracks such as those typically found due to settlement or in control joints can be cleaned out, opened up with a crack chaser where necessary, and patched with a suitable cementitious patching compound such as ARDEX A45, ARDEX A46 or even FEATHER FINISH.

If cracking is active, structural defects must be remedied before attempting repairs. Consult with an engineer on the project or request the services of a structural concrete repair professional to deal with cracking repair methods such as gravity filling small cracks (1mm max. width) with epoxy. If the crack is larger or extends entirely through the concrete slab, the use of epoxy injection following manufacturer's instructions is often recommended, or epoxy filling with steel pins. Ardex crack repair products ARDEX RA54, RA56 and RA88, RA142, RA144 or RA146 and ARDEX Crack Lock™ can be used for crack repair; ARDEX RA88, 142, 144 and 146 are epoxies, and also RA56 can be used also, all with broadcast sand over the resin and underneath the smoothing cements.

NOTE: Where cracks are present in a subfloor, the risk of transference and show through on decorative or feature floors (i.e. ARDEX Pandomo, ARDEX PC-T or ARDEX K80) can be significant.

Expansion or Isolation joints: Such joints are designed into the building and their integrity must be maintained. Do not install any topping or underlayment product over a joint which is designed to allow differential movement between concrete pours. AS1884-2012 says,

4.2 GENERAL INSTALLATION PROCEDURES

(f) Floor coverings shall not be laid over structural expansion joints or construction joints.

THEREFORE CONTINUE ALL MOVING JOINTS IN THE SLAB UP THROUGH THE UNDERLYMENT OR TOPPING.

WOODEN SUBFLOORS

Although the preparation required on the surface of wooden subfloors is the same for any type of 'wood' substrate, a distinction must be made with regard to the suitability of certain types of wooden substrates for the product proposed to be installed.

For applications requiring a self-levelling underlayment such as ARDEX ARDITEX NA, the subfloor must be a minimum of ¾" – 18mm tongue and groove APA-rated Type 1 exterior exposure plywood. Refer to Ardex Technical Bulletin TB015.

Solid hardwood flooring such as 20mm stripwood is also acceptable as a substrate and can be used with mesh re-inforced ARDEX K15M (See Ardex Technical Bulletin TB016). The wood subfloor must be structurally sound and solid, fixed securely and must conform to local building codes. To provide a solid base, re-nail all boards or plywood panels exhibiting movement. Open joints should be filled with ARDEX FEATHER FINISH.

Uneven wooden subfloors both T&G and particleboard may be pre-levelled with ARDITEX NA prior to installation of the underlay boards. ARDITEX NA Self-Smoothing Cement is also ideal for smoothing or levelling of uneven structural timber flooring prior to the installation of carpet floor coverings.

The surface of any type of suitable wooden subfloor must be clean and free of all oil, grease, wax, dirt, varnish, shellac, or any contaminant which might act as a bond breaker. **Sand the wooden subfloor, using a coarse abrasive, to remove all foreign matter and "protective coatings" to provide a clean mechanically sound surface.** A commercial drum sander can be used to sand larger areas.

Vacuum all dust and debris thoroughly to remove it.



Do not use solvents, strippers or cleaners to remove contamination from the surface of the wood. *Only clean, bare wood is a suitable surface.* If contamination exists which cannot be effectively removed, an overlay of ½" – 12mm plywood may be used as an alternative to complete removal and replacement of the wood.

There are a variety of other types of manufactured wooden subfloors which are recommended by flooring manufactures for certain grades or types of floor covering. Masonite, M.D.F. Board* and certain plywoods, and other types of wood composites may be recommended as being suitable to receive a certain manufacturer's flooring. If the manufacturer of the finished goods approves that substrate as being suitable, and the surface requires smoothing or flash patching, ARDEX FEATHER FINISH can be used over any type of wood. The installation of the underlay board must be performed in strict accordance with the manufacturer's written instructions. Do not use ARDEX FEATHER FINISH as a short cut to bypass specific installation instructions such as sanding the surface of the underlay board unless the manufacturer permits the use of a skimcoat product.

**Masonite and MDF are unsuitable substrates for the installation of liquid smoothing cements and toppings, waterproof membranes and ceramic tile adhesives. Installation of tiles to timber floors is covered in Ardex Technical Bulletin TB168 and FC oversheeted timber floors in TB218.*

NON POROUS SUBSTRATES

Smooth, dense and solid substrates such as; ceramic and quarry tile, natural stone, cementitious and epoxy terrazzo, and solidly bonded epoxy coatings can be smoothed with an ARDEX underlayment prior to the installation of new flooring (and can also be tiled over), refer to Ardex Technical Bulletins TB017 and TB117.

The surface of these substrates must be clean and free of all contaminants including oil, grease, wax, etc. Due to the non-porous character of these substrates, sealers, dressing and surface treatments can often be completely removed effectively using professional stripping agents. As an alternative and where stripping is not a sufficient technique, mechanically cleaning of all of the above non-porous substrates can be used to remove all foreign matter.

Please note that all hard surface tile substrates must be thoroughly evaluated for the bond of the individual tiles. All tiles which are not solidly bonded must be completely removed including the setting mortar, down to clean, sound, solid concrete. Refer to Ardex Technical Bulletin TB017.

Caution: Epoxy coatings may be suitable as a substrate to receive certain ARDEX products. It is imperative that the soundness of the coating be evaluated thoroughly as to the strength of its bond before attempting to install an underlayment product over it.

One way of ensuring a good bond is to attempt mechanical removal. If removal is difficult or impossible, install a test area of underlayment as recommended below. If removal can be done readily using a mechanical method, continue removal to clean, sound, solid concrete. Refer to Technical Bulletin TB108 for more information.

METAL SUBFLOORS

Metal subfloors are found in certain hospital applications, some industrial settings as well as on naval and commercial sailing vessels. For example, lead*, aluminium, or copper* foil installed over a concrete substrate are used to shield X-ray and MRI testing rooms in hospitals. Naval vessels and commercial cruise liners and casino boats likely have steel decking as the subfloors throughout the ship.

Such surfaces often need to be smoothed with a cementitious underlayment prior to the installation of new finish flooring (although tiles may be directly applied in certain situations).

Prior to installing underlayments, all metal subfloors must be clean and free of rust, oil, grease, and all other contaminants. Steel decking must be structurally sound and properly anchored. Metal foils must be solidly bonded 100% to the substrate.

Remove oil and grease in accordance with S.S.P.C.-SP1 solvent cleaning - brush blast to obtain a mechanical profile for coating adhesion, (as per the coatings manufacturers written instructions) and remove rust and other contaminants from the surface of the metal. For steel decking, paint the surface with an anti-corrosive coating to prevent rust from recurring. Aluminium flooring oxidises and also requires a protective coating. *A specific epoxy primer is recommended for this procedure and it is vital not to use aluminised primers as these will react with the underlayment cement.*

Specific instructions for this installation are available from ARDEX Technical Services and are described in Ardex Technical Bulletins TB100 and TB133.

*Copper and lead refer to ARDEX Technical Services.

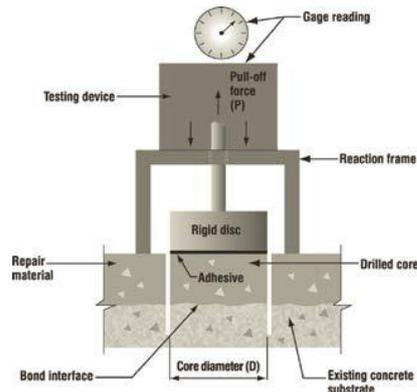


TEST AREAS

Although we have presented a variety of substrate conditions and offered technical recommendations for each, we cannot anticipate every possible condition that a substrate may be found in. For this reason, we recommend that this guide be used as a general reference for preparing substrates to receive ARDEX products, and that a test installation be placed to ensure suitability.

Always install an adequate number of properly located test areas to including the finish flooring, to determine the suitability of the product for its intended use. As floor coverings vary, always contact and rely upon the floor-covering manufacturer for specific directives to include such requirements as maximum allowable moisture content, adhesive selection, and intended end use of the product.

Testing can also involve examination of the properties of the substrate, for example testing the tensile strength of a concrete or screed to see if complies with the product or standard requirements.



The above picture (from Winkler 2014) shows the basic methodology for conducting a tensile test for the strength of concrete. Ardex recommends that concrete have a tensile strength that exceeds 1.5MPa before applying a smoothing cement. Where a sand-cement or granolithic screed is the substrate, it must have a tensile strength of 1.5MPa and compressive strength of 20MPa (as per AS1884-2012). Weak substrates are a guaranteed source of problems.

PRIMING

Priming is an **integral** part of the flooring system and ARDEX supplies several types of primer depending on the application. The following is a general guideline.

NOTE: Priming is an integral part of the applied Ardex product system, but it is not intended to make up for poor surface preparation or a weak substrate. It is a myth that primers will fix all adhesion issues. Primers will normally bond to residues, and weak surface materials, but then when the unsound material releases from the substrate, the primer goes with it.

Underlayments

a) For clean and standard porous concrete surfaces the primers are:

ARDEX P51 diluted to 2:1 with water for normal applications

ARDEX MULTIPRIME for certain products

ARDEX WPM300 + broadcast sand (wet areas, external and special applications)

ARDEX WPM368 (wet areas)

ARDEX P9 diluted 1:1 with water for some situations

b) For timber and smooth, non-absorbent substrates such as ceramic and quarry tile, terrazzo, marble, burnished concrete and metal decking,

ARDEX P82

ARDEX P9 (for specific applications)

NOTE: When using ARDEX P82 with ARDEX K15, K12N, K120, K220 these underlayments must be mixed with ARDEX E25. *ARDEX K80, K301 and K1 shall not be used with P82.*

Flooring adhesives (resilient and carpet)

In some situations, the water based flooring adhesives can be used with ARDEX P51 primer diluted 1:2 with water.

Ceramic Tiles

a) For clean and standard porous concrete surfaces the primers are:

ARDEX MULTIPRIME

ARDEX WPM265 for certain products

ARDEX WPM300 +/- broadcast sand

ARDEX WPM368

ARDEX P9 (preferred for non porous)

b) For timber and smooth, non-absorbent substrates such as ceramic and quarry tile, terrazzo, marble, burnished concrete and metal decking,

ARDEX P82 (dry internal only)

ARDEX OPTIMA for certain applications

ARDEX P9

c) For mechanically prepared ceramic tiles it is feasible to use

ARDEX MULTIPRIME for certain adhesive product and applications

ARDEX P9

Waterproof membranes

Refer to the individual product recommendations or technical bulletins.

For the common usage flexible membranes such as ARDEX WPM001, 002 or 155 on clean and standard porous concrete surfaces the primers are:

ARDEX WPM265

ARDEX MULTIPRIME

ARDEX WPM270

ARDEX WPM300

ARDEX WPM368

ARDEX P9

The use of non-ARDEX primers or bonding agents is not recommended. Limited testing with certain proprietary bonding agents has shown that the performance of ARDEX flooring systems can be altered by their use, and no product warranty is applicable.

Always refer to the product data sheets for specific usage details, or Ardex Technical Bulletins and specific System Recommendations.

NOTE: The information contained herein is to the best of our knowledge true and accurate.

No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of the product application. Users are asked to check that the literature in their possession is the latest issue.

References

Winkler P. (2014) *Introduction to ICRI Technical Guideline N0.319.2R-2013. Selecting and specifying concrete surface preparation for sealers, coatings, polymer overlays and concrete repair*. Concrete Repair Bulletin, May-June 2014., pp 17-19.

IMPORTANT

This Technical Bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the products described. Since each project potentially differs in exposure/condition specific recommendations may vary from the information contained herein. For recommendations for specific applications/installations contact your nearest Ardex Australia Office.

DISCLAIMER

The information presented in this Technical Bulletin is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of a product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

REASON FOR REVISION

24 month review. Addition of RA142, RA144 and RA146 and Crack Lock, K120 and K220. Deletion of K009. Revision of text related to use of water blasting.

REVIEW REQUIRED

36 months from issue

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