ARDEX X 77

Premium Microtec Flexible Wall & Floor Tile Adhesive

Achieves up to double the slump resistance of T class adhesives

Achieves up to double the extended open time of E class adhesives

Microtec Technology immprovesadhesive strength, reduces the effect of sheer strain and stress on tiling systems

CONFORMS TO ISO 13007

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DESCRIPTION
ARDEX X77 is a high performance, fibre reinforced, polymer modified wall and floor tile adhesive, which has been specially formulated with Microtec Technology to give exceptional properties of adhesion. When mixed with water, an extremely smooth, creamy mortar is produced with superior slump resistance and double extended open time.

ARDEX X77 contains Microtec Technology which greatly improves the adhesion strength, plus increases the ability of the mortar to be more capable of withstanding stress and shear strain, meaning increased security in the tiling system.

ARDEX X77 is suitable for use in both internal and external applications and is especially suited to high performance situations with heavy pedestrian traffic e.g. shopping centres. ARDEX X77 accommodates shrinkage movement associated with early age concrete and screeds. It can be used over concrete that is at least 7 days old and screeds and renders after 24 hours. ARDEX X77 has a reduced risk of efflorescence due to the addition of special additives. ARDEX X77 is also ideal for use in wet areas and swimming pools.

ARDEX X77 can be modified with the addition of ARDEX E90 to give improved deformability (S2) and water repellent qualities. ARDEX X77 meets the Green Building Council of Australia Green requirements for Ceramic Tile Adhesives.

TO (SUBSTRATES)
- Concrete, renders, screeds
- Fibre-cement sheet, plasterboard on walls
- Compressed fibre-cement sheet on floors
- ARDEX liquid applied undertile waterproofing membranes
- Existing ceramic tiles (internal dry areas)
- Existing ceramic tiles (wet areas or external environments)
- Autoclaved Aerated Concrete (AAC)

FOR FIXING (TILE TYPES)
Fully vitrified and ceramic tiles, porcelain, concrete stone tiles e.g. terrazzo, natural stones (excluding moisture sensitive), glass and porcelain mosaics.

SUBSTRATE PREPARATION
The surface being adhered to must be clean, firm and free of dust, dirt, oil, grease, curing compounds, release agents and other barrier materials, as well as being strong enough to support the weight of the tiles being fixed. Ensure surfaces are dry before tiling, with no residue or permanent damp.

Ensure that the substrate's required drying time, as given in the relevant part of AS 3958, is allowed to elapse prior to fixing the tiles. Prime porous substrates with ARDEX Multiprime.

CONCRETE
This includes precast, in-situ and wood floated concrete. Any surface laitance, concrete sealers, curing compounds, and other materials shall be removed from the surface prior to tiling. Steel trowel finished concrete should be roughened mechanically to remove laitance and provide a good key for tiling. The surface should be true and level and pitched to drains where required.

The concrete should have adequate surface profile (e.g. CSP 2-3) to provide a mechanical key. Smooth surfaces and/or dense concrete greater than 35MPa must be mechanically prepared prior to tiling.

CEMENT RENDERS / SCREEDS
New renders and screeds should be finished with a wood float to the required surface regularity. Screeds shall be pitched to drains where required. For bonded screeds allow 24 hours to cure prior to tiling. For unbonded screeds allow at least 7 days to cure prior to tiling.

COMPRESSED FIBRE-CEMENT SHEET (FLOORS)
INTERNAL APPLICATIONS
These sheets must be fixed strictly in accordance with manufacturer's instructions and be deemed suitable for the application by the manufacturer. Tiling over compressed fibre-cement sheet for external flooring applications should be carried out as per sheet manufacturer's recommendations and Australian Standard AS 3958.

Priming with ARDEX Multiprime is recommended for fibre-cement sheet but is not usually necessary except when jointing compound is used.

ARDEX LIQUID APPLIED UNDERTILE MEMBRANES
ARDEX undertile waterproofing must be applied according to instructions and thoroughly dry prior to tiling.

EXISTING CERAMIC TILES
(Internal Dry Areas Only)
Existing ceramic tiles, glazed or unglazed, must be sound, stable, and thoroughly cleaned using a PH neutral cleaner prior to tiling. Mechanical roughening is not necessary. To prepare the surface, apply a skim coat of ARDEX X77 over the clean tiles and allow to dry completely before tiling with ARDEX X77.

EXISTING CERAMIC TILES
(WET AREAS OR EXTERNAL ENVIRONMENTS)
Existing ceramic tiles, glazed or unglazed, must be sound, stable, and mechanicallly prepared by removing at least 80% of the glaze. Once prepared, prime the surface with ARDEX Multiprime or ARDEX P9 before tiling. This method is also appropiate for internal dry areas.

Note: Tiling over metal or glass surfaces internally, use ARDEX P82 (Two-part primer mixed in a 1:1 ratio) before applying any adhesive.

For more information on tile on tile please refer to TB117 - APPLICATIONS OF TILES ONTO PRE-EXISTING TILES.

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AUTOCLAVED AERATED CONCRETE (AAC)
Remove loose particles from surface and apply two coats of ARDEX Multiprime before tiling.

MIXING
ARDEX X77 powder is added to clean water in a large clean container whilst stirring vigorously with a paddle mixer. Mix thoroughly to give a lump free easily worked mortar of a thick creamy consistency. Mix for at least 2 minutes allow to stand for 5 minutes, and mix a second time for 2 minutes. A 15kg bag of ARDEX X77 requires approximately 6.5 - 6.75 litres of water.

The consistency of the adhesive can be adjusted to suit site conditions and size, weight and type of tiles to be fixed. Do not apply at temperatures below 10°C.

The pot life of the mixed mortar is approximately 3 hours at 23°C and 50% relative humidity.

For a special adhesive with higher deformability and improved water repellent properties use ARDEX E90 admix. First dilute the admix with water. For 15kg of ARDEX X77 powder, mix 2.5 litres of ARDEX E90 with up to 5.5 litres of water.

FIXING TECHNIQUE
Before fixing ensure the substrate has been prepared and the tiles are free from dust. Tiles should be fixed in accordance with Australian Standard AS 3958. Substrate surface, type and size of the tiles will determine the selection of the trowel. Refer to AS 3958 Table 5.6 - Trowel size guidance depending on nominal tile size.

The tiles must be pressed firmly into the freshly combed mortar bed to ensure good contact with the mortar. Slide the tile at right angles to the notch pattern to ensure contact requirement is in accordance with AS3958 - 21. Tiles with ribbed or keyed back profiles, large format tiles (400mm in either direction), should also be back buttered to ensure complete coverage. Lift a tile from time to time to check that there are no voids beneath the tile. Do not spot fix. Any surplus adhesive must be removed from the surface of the tile and joints, before the adhesive sets.

ARDEX X77 has an open time of 60 minutes and an adjustment time of 15 - 30 minutes. Please be aware of site conditions when considering these times and only spread enough adhesive so that the tiles can be fixed while the mortar is still wet.

All tools should be cleaned with water immediately after use.

MOVEMENT JOINTS
Movement joints must be in accordance with Australian Standard AS 3958 and substrates manufacturer's recommendations.

GROUTING
Grouting can proceed once the tile bed is sufficiently firm, usually 8 hours after fixing at 23ºC and 50% relative humidity. Allow longer for dense tiles/substrates, humid climates and low temperatures. The tile joints should be grouted with the appropriate ARDEX grout.

COVERAGE
A 15kg bag of ARDEX X 77 is sufficient for approx. 9m^2 on walls, using a 6mm notched trowel and 6m^2 on floors using a 10mm notched trowel. The coverage will vary depending on substrate condition, tile type and application technique.

SHELF LIFE
ARDEX X 77 has a shelf life of 12 months when stored in the original unopened packaging, in a dry place at 23ºC and 50% relative humidity.

PACKAGING
ARDEX X 77 is packed in polylined paper sacks – net weight 15kg.

Pay attention to the following:

- ARDEX X77 is not suitable for fixing green marble, ARDEX recommend other systems. Contact ARDEX Technical Services for further details.
- When setting tiles on shrinking substrates, limit the size of the area and ensure adequate movement joints are incorporated.For setting of moisture sensitive natural stones internally, please refer to products in the ARDEX Natural Stone System
- Do not use for tiling over exisiting tiles in immersed conditions.

SAFETY DATA
Wear protective gloves, protective clothing, eye protection and face protection. Do not breathe dust/fumes. Wash all exposed external body areas thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice / attention. Immediately call a doctor. IF ON SKIN: Wash with plenty of water and soap. If skin irritation or rash occurs: Get medical advice / attention. Take off contaminated clothing and wash it before reuse. IF INHALED: remove person to fresh air and keep comfortable for breathing. Store locked up. Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. Additional information is in the Safety Data Sheet (SDS) at ardexaustralia.com

This product causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. Suspected of causing genetic defects. Causes damage to organs through prolonged or repeated exposure.

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TECHNICAL PROPERTIES	
Colour	OFF WHITE
Mixing Ratio	6.5 - 6.75 litres per 15kg powder
Mixing Ratio with E90	2.5 litres of E90 & 5.5 litres of water
Coverage	$9m^2$ Walls $6m^2$ Floors

APPLICATION PROPERTIES AT 23°C AND 50% RH	
Open Time	60 mins
Adjustment Time	20 mins
Grouting Time	8 hours
Pot Life	3 hours
Sagging	None
Underfloor Heating	Yes
Workability	60 mins
Ready for floor coverings	60 mins

MECHANICAL PROPERTIES (ISO 13007) Tensile Adhesion Strength after	
28 Days Dry	≥ 1.0 MPa
Water Immersion	≥ 1.0 MPa
Heat	≥ 1.0 MPa
Freeze Thaw	≥ 1.0 MPa
Classification	C2 TE S1 (S2) with ARDEX E90

GUARANTEE

ARDEX Australia Pty Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us for 10 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 2 Buda Way Kemps Creek NSW 2178; Toll Free: 1800 224 070; Email: technicalservices@ardexaustralia.com) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the Australian Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss of damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

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 Standards. Our instructions and recommendations are only for the uses they are intended. Users are advised to confirm that this product is suitable for their application and conforms with the specifications of the system. 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 affect 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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