ARDEX X 77

Premium Microtec Flexible Wall and Floor Tile Adhesive

E(E) achieves up to double the extended open time of E class adhesives

T(T) achieves up to double the slump resistance of T class adhesives

More secure tiling system with Microtec Technology - improves adhesive strength, reduces the effect of shear strain and stress on tiling systems

ARDEX X 77 is ideal for fixing a range of tile types including fully vitrified, porcelain, natural stone, terrazzo and mosaics

Water and frost resistant - Ideal for swimming pools and wet areas Excellent workability
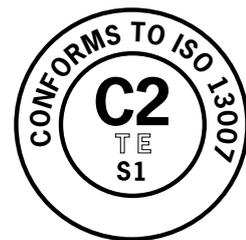
Flexible - achieves S1 classification (S2 with ARDEX E90)

Use over early age concrete/screeds and render

Suitable for internal and external wall and floor tiling

Reduced risk of efflorescence due to the addition of special additives

Low VOC content – meets Green Building Council of Australia Green Star IEQ-13 requirements

CONFORMS TO ISO 13007
C2
T E
S1

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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 is ideal for fixing all types of tiles including fully vitrified, porcelain, mosaics and non-moisture sensitive natural stone tiles.

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 16 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 Star IEQ-13 requirements for Ceramic Tile Adhesives when tested in accordance with SCAQMD Method 304-91 Determination of Volatile Organic Compounds (VOC) in Various Materials as referenced by South Coast Air Quality Management Division (SCAQMD) Rule 1168.

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.

TO (SUBSTRATES)

Concrete, renders, screeds
ARDEX liquid applied under tile waterproofing membranes
Fibre-cement sheet and plasterboard on walls
Gypsum plaster
Existing ceramic tiles
Autoclaved Aerated Concrete (AAC)
ARDEX DS40
Compressed fibre cement sheet on floors

SUBSTRATE PREPARATION

In general, 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. Note: ARDEX X77 is not suitable for fixing green marble, ARDEX recommend other systems. Contact ARDEX Technical Services for further details.

Autoclaved Aerated Concrete (AAC)

Remove loose particles from surface and apply two coats of ARDEX Multiprime before tiling.

Concrete

This includes precast, in-situ and wood floated concrete. Any surface laitance, concrete sealers, curing compounds, and other materials should be removed from the surface prior to tiling. The surface should be true and level and pitched to drains where required.

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

Cement Render/Screeds

New renders and screeds should be finished with a wood float to the required surface regularity. Screeds should be pitched to drains where required.

Plasterboard/Medium Density Fibre-Cement Sheet on Walls

Tiles can be fixed directly provided these boards are firmly and rigidly fixed in accordance with manufacturer's instructions to adequately support the tile bed.

Priming is recommended for fibre-cement sheets but is not usually necessary for plasterboard except when jointing compound is used.

Compressed Fibre-Cement Sheet on floors

These sheets must be fixed strictly in accordance with manufacturer's instructions and be deemed suitable for the internal application by the manufacturer.

Tiling over compressed fibre-cement sheets for external flooring applications should be carried out as per sheet manufacturer's recommendations and Australian Standard AS 3958.

ARDEX DS40 Soundproof Underlay

ARDEX X77 can be used for tiling to ARDEX DS40, once the matting has been fixed to the substrate with ARDEX X56 using a minimum of a 4mm notched trowel. Please refer to ARDEX DS40 data sheet.

Existing Ceramic Tiles

These include sound, clean, glazed and unglazed tiles. Ensure tiles are throughly cleaned prior to tiling. If the area to be tiled is internal and will not be in contact with water, tiles can be directly fixed using ARDEX X77 without mechanically grinding the glaze following the application of a skim coat which is allowed to dry prior to tiling. In permanently wet areas and externally, consult ARDEX Technical Services.

For internal application of tiles to metal and glass these should first be primed with ARDEX P82 two part primer mixed 1:1 ratio.

MIXING

ARDEX X77 powder is added to clean water in a clean container whilst stirring vigorously and mixed thoroughly to give a lump free easily worked mortar. The ARDEX X77 mortar must then be allowed to stand for at least 2 minutes prior to remixing for at least the same amount of time before use. ARDEX recommend the use of a mixing paddle for optimum results. 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 powder, mix 2.5kg of ARDEX E90 with up to 5.5L of water.

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FIXING TECHNIQUE
Before fixing ensure the substrate has been prepared and the tiles are free from dust. Tiles should be fixed in accordance with the Australian Standard AS 3958. Rough and uneven surfaces can be smoothed with ARDEX Levelling compounds, the surface must be left to dry before the tile installation can take place.

Substrate surface, type and size of the tiles will determine the selection of the trowel. As a general guide use a 6mm x 6mm x 6mm notched trowel for walls and 10mm x 10mm x 10mm notched trowel for floor tiling.

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 so that the back of the tile is completely covered by the mortar. Tiles with ribbed or keyed back profiles should also be buttered so that the voids are filled to a maximum thickness of 10mm.

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.

MOVEMENT JOINTS
Movement joints must be in accordance with Australian Standard AS 3958. As a general guide, movement joints should be incorporated at 4.5 metre intervals and around the perimeter of the floor. Any structural movement joints must be carried through to the face of the tiling. These joints must be approximately 6mm wide and kept free from adhesive and grout droppings. They should be filled with a suitable flexible material such as ARDEX SE Silicone. For walls, incorporate movement joints at internal corners, fixtures interrupting the tile surface, at 3-4.5 metre intervals and storey height for external fixing.

GROUTING
Grouting can proceed once the tile bed has hardened sufficiently so that tiles will not be dislodged. Typically the tile bed is hard enough after approximately 8 hours at 23ºC and 50% relative humidity. Allow longer for dense tiles/substrates, humid climates and low temperatures.

COVERAGE
15kg of ARDEX X77 is sufficient for approximately 9m² on walls, using a 6 x 6 x 6mm notched trowel and 6m² on floors using a 10 x 10 x 10mm notched trowel. The coverage will vary depending on substrate condition and tile type.

PACKAGING
ARDEX X77 is packed in polylined paper sacks – net weight 15kg.

SHELF LIFE
ARDEX X77 has a shelf life of 12 months when stored in the original unopened packaging, in a dry place at 23ºC and 50% relative humidity.

Pay attention to the following:
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.

Before any substrate preparation, installation or finishing methods relating to ARDEX product are undertaken, please be aware of any potential risks and use appropriate PPE (personal protective equipment). This may involve contacting substrate manufacturers for Safety Data Sheets.

SAFETY DATA
This product may cause irritation and an allergic reaction to the skin. It may cause serious eye injury and irritation to the respiratory system. Suspected of causing genetic defects. May cause cancer. In case of contact with the eyes rinse with running water until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Wear protective gloves, clothing, eye and face protection. Avoid inhaling dust/fumes/gas/mist/vapours/spray. Ensure adequate ventilation during mixing and application. Store locked up. Check with your local Council regarding the disposal of contents, dispose of packaging thoughtfully and recycle where possible. Keep out of the reach of children. Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. At times updates can occur to data. For additional information and to ensure you have the most current technical and safety information please consult the latest safety data sheets (SDS) and technical data sheets found on the product page at www.ardexaustralia.com.

TECHNICAL DATA

Colour:	Off White Powder
Mixing Ratio:	Approximately 6.5 - 6.75 litres water per 15kg powder

Application Properties at 23ºC and 50% RH

Open Time:	60 minutes
Adjustment Time:	15-30 minutes
Grouting Time:	8 hours
Pot life:	3 hours
Sagging:	None
Underfloor Heating:	Yes
Workability:	approx. 60 minutes
Ready to receive floorcoverings:	approx. 60 minutes

Mechanical Properties (ISO 13007)
Tensile Adhesion Strength after

28 Days Dry:	≥1.0 MPa
Water Immersion:	≥1.0 MPa
Heat Ageing:	≥1.0 MPa
Freeze Thaw:	≥1.0 MPa
Mixing Time:	6 minutes
Coverage:	9m² (walls) 6m² (floors)
Classification:	C2 FTE S1 (S2 with ARDEX E 90

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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, 20 Powers Road Seven Hills NSW 2147; 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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