ARDEX X 77

Premium Microtec Flexible Wall and Floor Tile Adhesive

Features

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 E 90)

Use over early age concrete/screeds and render

Efflorescence free due to the addition of special additives

Suitable for internal and external wall and floor tiling

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

CONFORMS TO AS 4992
C2
FT(T)E(E)
S1

ARDEX X 77
Premium Microtec Flexible Wall and Floor Tile Adhesive

DESCRIPTION

ARDEX X 77 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 X 77 is ideal for fixing all types of tiles including fully vitrified, porcelain, mosaics and non-moisture sensitive natural stone tiles.

ARDEX X 77 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 X 77 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 X 77 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 X 77 is efflorescence free due to the addition of special additives.

ARDEX X 77 is also ideal for use in wet areas and swimming pools.

ARDEX X 77 can be modified with the addition of ARDEX E 90 to give improved deformability (S2) and water repellent qualities. ARDEX X 77 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.

ARDEX X 77 is also suitable for fixing other building materials such as rigid insulating boards and building boards e.g. plasterboard.

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 DS 40
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 X 77 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

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 sheets for external flooring applications should be carried out as per sheet manufacturer's recommendations and Australian Standard AS 3958.

ARDEX DS 40 Soundproof Underlay

ARDEX X 77 can be used for tiling to ARDEX DS 40, once the matting has been fixed to the substrate with ARDEX X 56 using a minimum of a 4mm notched trowel. Please refer to ARDEX DS 40 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 X 77 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, glass and coats of varnish these should first be primed with ARDEX P 82 two part primer mixed 1:1 ratio.

MIXING
ARDEX X 77 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 X 77 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 X 77 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 5°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 E 90 admix, first dilute the admix with water. For 15kg of powder, mix 2.5kg of ARDEX E 90 with up to 5.5L 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 the Australian Standard AS 3958. Rough and uneven surfaces can be smoothed with ARDEX X 77, 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 X 77 has an open time of 60 minutes when tested to EN 1346, 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.

When fixing building and insulation boards, the mortar has to be applied to the back of the board. If the boards to be set do not have open pores, the surface should be roughened mechanically beforehand.

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 X 77 is sufficient for approximately 9m^2 on walls, using a 6 x 6 x 6mm notched trowel and 6m^2 on floors using a 10 x 10 x 10mm notched trowel. The coverage will vary depending on substrate condition and tile type.

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

SHELF LIFE
ARDEX X 77 has a shelf life of not less than 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 in the interior, please refer to products in the ARDEX Natural Stone System.

Do not use for tiling over exisiting tiles in immersed conditions.

SAFETY PRECAUTIONS

The presence of cement in the product gives an alkaline mortar which may cause some irritation if prolonged contact with skin takes place.
Avoid contact with skin and eyes; in case of contact with the eyes, rinse immediately with plenty of water and seek medical advice; wear suitable gloves and eye protection and keep the product out of the reach of children. Avoid generation of airborne dust during mixing. Physiologically and ecologically safe when cured.

For further material safety data, consult the latest Material Safety Data Sheet.

TECHNICAL DATA

Colour: Off White Powder

Mixing Ratio: 1 vol water:2.25 vol powder, approx 6.5 – 6.75 litres water per 15kg powder

Application Properties at 23ºC and 50% RH

Open Time: 60 minutes (when tested to EN 1346)

Adjustment Time: 15-30 minutes
Grouting Time: 8 hours
Pot life: 3 hours
Sagging: None
Underfloor heating: Yes

Mechanical Properties (AS 4992)
Tensile Adhesion Strength after 28 days dry: 1.0 - 2.0 MPa
Tensile Adhesion Strength after water immersion: 1.0 - 2.0 MPa
Warm: 1.0 - 1.5 MPa
Freeze Thaw: 1.0 - 1.5 MPa
Classification: C2 FT(T)E(E) S1 (S2 with ARDEX E 90)

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