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# ARDEX X78

## Microtec Flexible Floor Tile Adhesive

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

Unique consistency - easier to achieve full coverage on the tile combined with non lipping capabilities

More secure tiling system with Microtec Technology

Excellent workability - creamy and easier to spread

ARDEX X78 is ideal for large format tiles, plus a range of tile types including fully vitrified, porcelain, natural stone and terrazzo

Water and frost resistant - ideal for wet areas

Reduced chance of efflorescence due to the addition of special additives

Flexible – achieves S1 classification (S2 with ARDEX E 90)

Use over early age concrete/screeds

Suitable for internal and external floor tiling

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



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# ARDEX X78

## Microtec Flexible Floor Tile Adhesive

### DESCRIPTION

ARDEX X78 is a high performance, fibre reinforced, polymer modified 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, pourable mortar is produced which easily enables full coverage to be achieved on the back of floor tiles. It also has double extended open time and non lipping capabilities, making ARDEX X78 the only choice for heavy, large format floor tiles.

ARDEX X78 contains Microtec Technology which greatly improves the adhesion strength, plus increases the ability of the mortar to withstand stress and shear strain, meaning increased security in the tiling system.

It is suitable for use in both internal and external applications, wet areas and is especially suited to high performance situations with heavy pedestrian traffic e.g. shopping centres. ARDEX X78 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 after 16 hours.

ARDEX X78 reduces the chance of efflorescence due to the addition of special additives.

ARDEX X78 can be modified with the addition of ARDEX E 90 to give improved deformability (S2) and water repellent qualities. ARDEX X78 meets the Green Building Council of Australia Green Star IEQ-13 requirements for Ceramic Tile Adhesives.

### 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, screeds

ARDEX liquid applied underlayment waterproofing membranes

Compressed fibre-cement sheet

Existing ceramic tiles

Autoclaved Aerated Concrete (AAC)

ARDEX DS 40

### 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. Ensure surfaces are dry before tiling, with no residue of permanent damp.

Prime porous substrates with ARDEX Multiprime.

ARDEX X78 is designed for use on level floors and as such we strongly recommend the use of ARDEX floor levelling compounds prior to the application of the adhesive to achieve a truly flat surface.

### 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. 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. broom finish) to provide a mechanical key. Smooth surfaces and/or dense concrete greater than 35MPa must be mechanically roughened prior to tiling.

### Cement Screeds

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

### Compressed Fibre-Cement Sheet

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.

### ARDEX DS 40 Soundproof Underlay

ARDEX X78 can be used for tiling to ARDEX DS40, once the matting has been fixed to the substrate as per instructions on the ARDEX DS 40 datasheet.

### Existing Ceramic Tiles

These include sound, clean, glazed and unglazed tiles. Ensure tiles are thoroughly 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 X78 without mechanically grinding the glaze. The application of a skim coat which is allowed to dry prior to tiling is necessary. This is essential in non permanently wet areas e.g. showers.

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 X78 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 X78 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 20kg bag of ARDEX X78 requires approximately 7.5 - 8.0 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 5 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 20kg of powder, mix 3.6kg of ARDEX E 90 with up to 4.4L 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 should be smoothed with ARDEX floor 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 minimum 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 to ensure 100% coverage on the back of the tile. Tiles with ribbed or keyed back profiles should also be buttered so that the voids are filled.

ARDEX X 78 has an open time of 60 minutes when tested to EN 1346, and an adjustment time of 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. As a general guide, movement joints should be incorporated at 4.5 metre centres 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 a minimum of 6mm wide and kept free from adhesive and grout droppings. They should be filled with a suitable flexible material such as ARDEX SE or ST silicone.

### **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 24 hours at 23°C 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**

20kg of ARDEX X 78 is sufficient for approximately 6.5m<sup>2</sup> on floors using a 10 x 10 x 10mm notched trowel. The coverage will vary depending on substrate condition, tile type and application technique.

### **PACKAGING**

ARDEX X 78 is packed in polylined paper sacks – net weight 20kg.

### **SHELF LIFE**

ARDEX X 78 has a shelf life of not less than 12 months when stored in the original unopened packaging, in a dry place at 23°C 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 existing 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. If swallowed do not induce vomiting, give a glass of water and contact a doctor.

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

## TECHNICAL DATA

**Colour:** Off White Powder  
**Mixing Ratio:** approx. 7.5 to 8 litres water  
per 20kg powder

### Application Properties at 23°C and 50% RH

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

**Adjustment Time:** 30 minutes  
**Grouting Time:** 24 hours  
**Pot Life:** 5 hours  
**Lipping:** None  
**Underfloor Heating:** Yes

### Mechanical Properties (AS 4992)

**Tensile Adhesion Strength after**  
**28 Days Dry:** 1.0 - 2.0 MPa  
**Water Immersion:** 1.0 - 2.0 MPa  
**Warm:** 1.0 - 1.5 MPa  
**Freeze Thaw:** 1.0 - 1.5 MPa  
**Classification:** C2 E(E) S1  
(S2 with ARDEX E 90)

## 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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