



CI/SfB

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MAY 2008
PRODUCT DATA SHEET

ARDEX X77 ARDEX X77 W

MICROTEC Flexible Wall and Floor Tile Adhesive

MICROTEC fibre reinforcement for premium performance

Ideal for all tile types including porcelain, fully vitrified, mosaics and terrazzo

T(T) = achieves up to double the slump resistance of 'T' classified adhesives

E(E) = achieves an open time of 60 minutes (up to double the open time of 'E' classified adhesives)

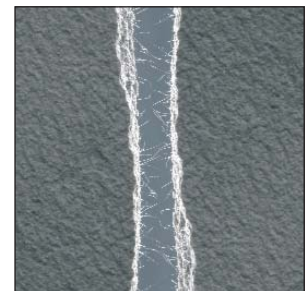
Excellent application properties and high yield

Ideal for swimming pools and wet areas

For internal and external applications

Suitable for underfloor heating

Available in grey or white



Reg No. FM 1207

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ARDEX X 77 / ARDEX X 77 W

MICROTEC Flexible Wall and Floor Tile Adhesive

DESCRIPTION

ARDEX X 77 / ARDEX X 77 W is a grey or white, MICROTEC fibre reinforced, cement-based, floor and wall tile adhesive, specifically formulated to have enhanced properties of adhesion and flexibility ideal for fixing porcelain or fully vitrified tiles and other tiles with low porosity as well as glass and porcelain mosaics. The enhanced performance of ARDEX X 77 / ARDEX X 77 W means that it has a considerably longer open time, even under site conditions, than other adhesives currently classified as having extended open time. In addition, the enhanced slump resistant properties mean that even heavy tiles may be fixed to walls with minimum slip.

The BS EN 12004 C2 FT(T)E(E) S1 designation for ARDEX X 77 / ARDEX X 77 W classifies the adhesive as an "improved cementitious adhesive with additional characteristics, reduced slip and extended open time". The E(E) designation means that ARDEX X 77 has an extended open time of over 60 minutes - twice the requirement of BS EN 12004. T(T) indicates the superior slip resistance. The additional characteristics for ARDEX X 77 / ARDEX X 77 W determined in accordance with BS EN 12004 are a tensile adhesion strength of greater than 1 N/mm² as an initial adhesion value, greater than 1 N/mm² after water immersion, greater than 1 N/mm² after heat aging and greater than 1 N/mm² after freeze thaw cycling making this product suitable for fixing all types of ceramic tiles and mosaics in internal and external situations, including swimming pools. The mixed mortar has a slump free consistency with very high initial grab enabling heavy wall tiles to be fixed thus reducing or dispensing with the need for battens and spacers. ARDEX X 77 / ARDEX X 77 W adheres strongly to most construction materials such as concrete, cement and sand renders and screeds, heated sub-floors, brickwork and blockwork, gypsum plaster, plasterboard and existing ceramic tiled surfaces.

SURFACE PREPARATION

The backgrounds to receive the ceramic tiles should be mature, stable and be installed in accordance with the relevant parts of BS 5385 and BS 8000 : Part 11 Workmanship on Building Sites. Backgrounds to receive ceramic tiles should be finished so any gap under a 2m straight edge does not exceed 3mm.

The surface being adhered to must be clean, firm, free of dust, dirt, oil, grease and other barrier materials as well as being strong enough to support the weight of the tiles being fixed. Ensure that the background has had adequate drying time prior to fixing the tiles.

ARDEX X 77 / ARDEX X 77 W can be applied to dry or moist surfaces but moisture sensitive materials must be dry and remain dry after fixing (refer to Guidance Notes on Backgrounds to be Tiled - ARDEX WPC).

MIXING

ARDEX X 77 / ARDEX X 77 W powder is added to clean water in a clean container whilst stirring and mixed thoroughly to give a slump free, easily worked mortar. The use of an ARDEX mixing paddle with a 10mm chuck, variable speed electric drill makes light work of mixing. The mix proportions by volume are approximately: 2 parts ARDEX X 77 / ARDEX X 77 W powder to 1 part water.

A 20kg bag of ARDEX X 77 requires up to 8.8 litres of water. DO NOT EXCEED the maximum of 8.8 litres of water per 20kg bag of ARDEX X 77.

A 20kg bag of ARDEX X 77 W requires up to 9.0 litres of water. DO NOT EXCEED the maximum of 9.0 litres of water per 20kg bag of ARDEX X 77 W.

The consistency of the adhesive can be adjusted to suit site conditions and the materials being fixed. The mortar should be applied at temperatures above 5°C.

The pot life of the mixed mortar is approximately 3 hours at 20°C.

FIXING TECHNIQUE

The mixed mortar is applied to the prepared surface with a trowel and then combed through with a suitably sized notched trowel in straight ribs to give a ribbed mortar bed. The tiles should be fixed within the open time of the applied adhesive and pressed into place with a twisting and sliding action to achieve the required contact. For tiling to walls in dry internal locations the adhesive contact should be with at least 50% of the back of the tile. For maximum performance at least 80% of the back of the tile should be adhered. When tiling to floors and all external situations, or in wet areas such as showers and swimming pools, solid bed fixing should be achieved. Achieving a solid bed usually requires the tiles to be buttered immediately prior to placing into the ribbed bed so no voids are left beneath the tiles. The size of notched trowel chosen depends on the tile size, the surface being tiled, the profile on the back of the tile and the degree of coverage required.

ARDEX X 77 / ARDEX X 77 W is classified as having an extended open time of not less than 60 minutes with freshly mixed material when measured in accordance with BS EN 12004. For optimum performance under typical UK site conditions tiles should be fixed within 40 minutes and tiles can be adjusted for up to 30 minutes at 20°C.

GROUTING

Grouting can proceed once the tile bed has hardened sufficiently so that the tiles will not be dislodged. When grouting wall tiles the ARDEX X 77 / ARDEX X 77 W is normally hard enough after 8 hours at 20°C depending on the porosity of the tile and the background. When grouting floor tiles the ARDEX X 77 / ARDEX X 77 W is normally hard enough after 24 hours at 20°C to accept foot traffic depending on the porosity of the tile and the background. Higher temperatures will shorten and lower temperatures will lengthen these times. The tile joints should be grouted with the appropriate ARDEX or ARDEX-FLEX grout mortar.

COVERAGE

A 20kg bag of ARDEX X 77 / ARDEX X 77 W will yield approximately 19 litres of mortar, using approximately 1kg of powder per m² per mm thickness of adhesive bed. The actual coverage achieved in practice will depend on the back profile of the tile and notched trowel and technique used to bed the tiles e.g. a 20kg bag of ARDEX X 77 / ARDEX X 77 W will cover approximately 11m² when using a 5mm x 5mm square toothed and notched trowel.

PRIMERS

ARDEX P 51

The primer to use on plaster and anhydrite screeds before fixing with ARDEX X 77 / ARDEX X 77 W adhesive, diluted 1:3 with water.

ARDEX P 82

Non-flammable, water-based synthetic primer for priming smooth impervious surfaces including existing ceramic tiling, internal asphalt, terrazzo, sound and well adhered paint coatings and old adhesive residues, prior to the use of ARDEX X 77 / ARDEX X 77 W.

GUIDANCE NOTES ON BACKGROUNDS TO BE TILED

Concrete

Allow at least 6 weeks, under good conditions, preferably at least 12 weeks drying time prior to fixing new tiles onto new concrete. Mechanically clean concrete and ensure mould oil and curing agents are removed.

Cement/sand render and screed

Wood float finish and prevent rapid drying of the surface for 3 days (renders) or 7 days (screeds). Allow render to air dry in good conditions for at least 2 weeks prior to tiling or at least 3 weeks for screeds prior to tiling.

Note for Screeds: With a ARDEX A 35 cement/sand screed, tiles can be fixed after only 24 hours.

With a bonded ARDEX EB 2 cement/sand screed, tiles can be fixed after only 3 hours.

Note for Renders: With ARDEX AM 100 Rapid Hardening One Coat Tile Render tiles can be fixed only 2 hours after application.

Gypsum Plaster

Do not use in wet or damp conditions. Gypsum plaster must be dry and at least 4 weeks old prior to tiling. Wire brush plaster to remove dust. Use ARDEX P 51 primer. Tile weight should not exceed 20kg/m².

Plasterboard

Ensure boards are rigidly braced and adequately supported. Fix directly to the paper facing. Do not skim with plaster. Tile weight should not exceed 32kg/m².

Wood-based sheets and boards

For fixing to these backgrounds, consult the ARDEX-FLEX 7001/ARDEX-FLEX 7001 W data sheet for floors and the ARDEX D 20 or ARDEX D 30 data sheet for walls.

Painted surfaces

A trial area should be carried out by priming the sound paint coating with ARDEX P 82 primer prior to fixing the tiles in ARDEX X 77 / ARDEX X 77 W.

ARDEX WPC

Can be used to protect moisture sensitive backgrounds in wet locations, prior to fixing tiles.

Calcium Sulfate-based screeds i.e. Anhydrite

Ensure they have been laid and prepared in accordance with the manufacturers' recommendations. Generally they require sanding and must have a moisture content of 0.5% or less, measured using the carbide method. Prime with ARDEX P 51, diluted with 3 parts of water.

Existing glazed ceramic tiling

Ensure existing tiling is well adhered and can support the new tile bed. Thorough cleaning and rinsing off essential. Prime tiles with ARDEX P 82. Internal dry areas only.

Brickwork

Allow new walls to dry for at least 6 weeks, preferably 12 weeks prior to direct fixing or rendering.

Concrete blockwork

New walls should be built with dry blocks. Allow 6 weeks, preferably 12 weeks drying time prior to direct fixing or rendering.

Asphalt sanded

With well adhered sand key no primer is required. Internal areas only. If sand key is poor or worn off, proceed as for smooth asphalt.

Asphalt smooth

Priming with ARDEX P 82 recommended. Internal dry areas.

Underfloor heating

ARDEX X 77 / ARDEX X 77 W is suitable for fixing ceramic tiles to concrete or cement and sand screeds with underfloor heating.

PACKAGING

ARDEX X 77 / ARDEX X 77 W is packed in paper sacks incorporating a polyethylene liner - net weight 20kg.

STORAGE AND SHELF LIFE

ARDEX X 77 contains a reducing agent to control the level of Chromium VI when mixed prior to use.

ARDEX X 77 must be stored in unopened packaging, clear of the ground in cool dry conditions and protected from excessive draught. If stored correctly, as detailed above, and used within 12 months of the date shown on the packaging, the activity of the reducing agent (added to control the level of soluble Chromium VI) will be maintained and this product will contain, when mixed with water, no more than 0.0002% (2ppm) soluble Chromium VI of the total dry weight of the cement content of this product.

ARDEX X 77 / ARDEX X 77 W must not be used after the end of the declared storage period.

PRECAUTIONS

ARDEX X 77 / ARDEX X 77 W contains more than 20% portland cement and, therefore, in line with current legislation, is classified as irritating to eyes and skin. For this reason the following precautions should be observed:-

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 keep the product out of the reach of children. Avoid generation of airborne dust during mixing.

For further information consult the relevant health and safety data sheet.

TECHNICAL DATA

Weight of fresh mortar	approximately 1.5kg/litre
Working time (20°C)	approximately 3 hours
Fixing time (20°C)	approximately 60 minutes
Adjusting time (20°C)	approximately 30 minutes

PROPERTIES TESTED TO BS EN 12004

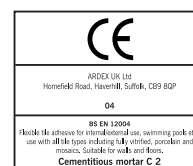
Open Time: approximately 60 minutes

Slip Resistance: Slip - less than 0.5mm

Tensile Adhesion Strength: Greater than 1 N/mm² under all test conditions.

PROPERTIES TESTED TO BS EN 12002

Transverse Deformation: Classification S1 (Deformation greater than or equal to 2.5mm and less than 5mm)



NOTE: The information supplied in our literature or given by our employees is based upon extensive experience and, together with that supplied by our agents or distributors, is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however, as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.