



CI/SfB

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PRODUCT DATA SHEET

ARDEX X77 S ARDEX X77 WS

MICROTEC Ultra Rapid Setting Flexible Wall and Floor Tile Adhesive

MICROTEC fibre reinforcement for premium performance

Ultra rapid setting and hardening – walk on and grout after only 90 minutes

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

F(F) = early adhesion achieved up to 4 times faster than standard 'F' classified adhesives

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



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ARDEX X 77 S / ARDEX X 77 W S

MICROTEC Ultra Rapid Setting Flexible Wall and Floor Tile Adhesive

DESCRIPTION

ARDEX X 77 S / ARDEX X 77 W S is a MICROTEC fibre reinforced rapid setting and hardening, grey or white cement-based, floor and wall tile adhesive. It can be walked on and grouted after only 90 minutes at 20°C even for floor tiling and is specifically formulated to have enhanced properties of adhesion and flexibility, making it ideal for fixing fully vitrified or porcelain tiles, other tiles with low porosity as well as glass and porcelain mosaics without the need of an admixture. It is 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 high initial grab enabling heavy wall tiles to be fixed thus reducing or dispensing with the need for battens and spacers. ARDEX X 77 S / ARDEX X 77 W S 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.

The BS EN 12004 C2 F(F) T(T) S1 designation for ARDEX X 77 S / ARDEX X 77 W S classifies the adhesive as an "improved fast setting cementitious adhesive with additional characteristics and reduced slip". EN 12004 specifies that a rapid setting adhesive must achieve at least 0.5N/mm² at 24 hours. The enhanced setting and hardening performance of ARDEX X 77 S / ARDEX X 77 W S means that after only 6 hours, the adhesive has already achieved the EN 12004 requirement of 0.5N/mm².

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 to Surface Regularity 1, i.e. 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 adequate drying time, as given in the relevant part of BS 5385, prior to fixing the tiles. ARDEX X 77 S / ARDEX X 77 W S 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 S / ARDEX X 77 W S powder is added to clean water in a clean container whilst stirring and mixed thoroughly to give a slump free easily worked mortar. The mix proportions by volume are approximately: 2³/₄ parts ARDEX X 77 S / ARDEX X 77 W S powder to 1 part water.

A 20kg bag of ARDEX X 77 S / ARDEX X 77 W S requires 6.8 litres of water. DO NOT EXCEED the maximum of 6.8 litres of water per 20kg bag of ARDEX X 77 S / ARDEX X 77 W S.

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 30 minutes 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 at least with 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. To achieve 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.

NOTE: ARDEX X 77 S / ARDEX X 77 W S should always be mixed to a slump free consistency - for information

on fluid, pourable, floor tile bedding mortars consult the ARDEX S 21, ARDEX X 78 S, ARDEX-FLEX S 38 and ARDEX-FLEX 7001 data sheets. The freshly mixed applied mortar has an open time of up to 20 minutes and tiles can be adjusted for up to 15 minutes after fixing at 20°C.

GROUTING

Wall tiles can be grouted as soon as the tile bed has set and hardened sufficiently so that the tiles will not be dislodged, typically 1 hour after fixing tiles at 20°C. Similarly floor tiles can be grouted once the ARDEX X 77 S / ARDEX X 77 W S has hardened sufficiently to support light foot traffic, typically 1 1/2 hours after fixing at 20°C 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 S / ARDEX X 77 W S will yield approximately 16.7 litres of mortar, using approximately 1.2kg 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 S / ARDEX X 77 W S will cover approximately 9.5m² when using a 5mm x 5mm square toothed and notched trowel.

PRIMERS

ARDEX P 51

Water-based primer for use on plaster backgrounds and anhydrite screeds before fixing with ARDEX X 77 S / ARDEX X 77 W S adhesive, diluted 1:3 with water.

ARDEX P 82

Non-flammable, water dispersed epoxy 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 S / ARDEX X 77 W S.

GUIDANCE NOTES ON BACKGROUNDS TO BE TILED

Concrete

Allow at least 6 weeks, 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 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 EB2 cement/sand screed, tiles can be fixed after only 3 hours.

Note for Renders: With ARDEX AM100 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 Timber System 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 S / ARDEX X 77 W S.

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 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 prior to direct fixing or rendering.

Concrete blockwork

New walls should be built with dry blocks. Allow 6 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 S / ARDEX X 77 W S is suitable for fixing ceramic tiles to concrete or cement and sand screeds with underfloor heating.

PACKAGING

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

STORAGE AND SHELF LIFE

ARDEX X 77 S contains a reducing agent to control the level of Chromium VI when mixed prior to use. ARDEX X 77 S 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 6 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 S / ARDEX X 77 W S must not be used after the end of the declared storage period.

PRECAUTIONS

ARDEX X 77 S / ARDEX X 77 W S contain 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

Bulk density of powder	approx.	1.1kg/litre
Weight of fresh mortar	approx.	1.6kg/litre
Working time (20°C)	approx.	30 minutes
Fixing time (20°C)	approx.	20 minutes
Adjusting time (20°C)	approx.	15 minutes

Tensile Adhesion Strength Greater than 1 N/mm²

PROPERTIES TESTED TO BS EN 12004

Open Time: approximately 20 minutes

Slip Resistance: Slip - less than 0.5mm.

Tensile Adhesion Strength: At least 0.5 N/mm² at 6 hours.

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.