



CI/SfB

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PRODUCT DATA SHEET

# ARDEX X78S ARDEX X78WS

## MICROTEC Ultra Rapid Setting Flexible Floor Tile Adhesive

MICROTEC fibre reinforcement for premium performance

Unique consistency – the benefits of a pourable adhesive, without the disadvantages

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 the standard 'F' 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 78 S / ARDEX X 78 W S

## MICROTEC Ultra Rapid Setting Flexible Floor Tile Adhesive

### DESCRIPTION

ARDEX X 78 S / ARDEX X 78 W S is a grey or white MICROTEC fibre reinforced rapid setting cement-based floor tile adhesive which can be walked on and grouted after only 90 minutes at 20°C. It is specifically formulated to have enhanced properties of adhesion and flexibility ideal for fixing fully vitrified or porcelain tiles and other tiles with low porosity as well as glass and porcelain mosaics and terrazzo without the need of an admixture.

The BS EN 12004 C2 F(F) designation for ARDEX X 78 S / ARDEX X 78 W S classifies the adhesive as an 'improved fast setting cementitious adhesive with additional characteristics. The additional characteristics for ARDEX X 78 S / ARDEX X 78 W S determined in accordance with BS EN 12004 are a tensile adhesion strength of greater than 1 N/mm<sup>2</sup> adhesion value, greater than 1 N/mm<sup>2</sup> after water immersion, greater than 1 N/mm<sup>2</sup> after heat aging and greater than 1 N/mm<sup>2</sup> after freeze thaw cycling, making this product suitable for internal and external situations, including swimming pools. EN 12004 specifies that a rapid setting adhesive must achieve at least 0.5N/mm<sup>2</sup> at 24 hours. The enhanced setting and hardening performance of ARDEX X 78 S / ARDEX X 78 W S means that after only 6 hours, the adhesive has already achieved the EN 12004 requirement of 0.5N/mm<sup>2</sup>. The mixed mortar has an easily workable consistency to facilitate floor tile fixing. ARDEX X 78 S / ARDEX X 78 W S adheres strongly to most construction materials such as concrete, cement and sand screeds, heated sub-floors, anhydrite screeds, 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 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 5385-3:2007, prior to fixing the tiles. ARDEX X 78 S / ARDEX X 78 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 78 S / ARDEX X 78 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: 2<sup>3</sup>/<sub>4</sub> parts ARDEX X 78 S / ARDEX X 78 W S powder : 1 part water.

A 20kg bag of ARDEX X 78 S requires up to 6.6 litres of water. DO NOT EXCEED the maximum of 6.6 litres of water per 20kg bag of ARDEX X 78 S.

A 20kg bag of ARDEX X 78 W S requires up to 7.0 litres of water. DO NOT EXCEED the maximum of 7.0 litres of water per 20kg bag of ARDEX X 78 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 ensuring solid bed fixing is achieved.

ARDEX X 78 S / ARDEX X 78 W S has an open time of up to 20 minutes and tiles can be adjusted for up to 15 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 floor tiles the ARDEX X 78 S / ARDEX X 78 W S is normally hard enough after 1<sup>1</sup>/<sub>2</sub> 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 78 S / ARDEX X 78 W S will yield approximately 16.5 litres of mortar, using approximately 1.2kg of powder per m<sup>2</sup> 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 78 S / ARDEX X 78 W S will cover approximately 9.4m<sup>2</sup> when using a 5mm x 5mm square toothed and notched trowel.

### PRIMERS

#### ARDEX P 51

The primer to use on plaster and other calcium sulfate-based substrates before fixing with ARDEX X 78 S / ARDEX X 78 W S adhesive, diluted 1 : 3 with water.

#### ARDEX P 82

Non-flammable, water dispersed epoxy primer for priming internal, 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 78 S / ARDEX X 78 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 tiles onto new concrete. Mechanically clean concrete and ensure mould oil and curing agents are removed.

#### Cement/sand screed

Wood float finish and prevent rapid drying of the surface for 7 days. Allow to air dry for at least 3 weeks prior to tiling.

**Note for Screeds:** With a ARDEX A35 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.

#### Wood-based sheets and boards

For fixing to these backgrounds, consult the ARDEX-FLEX 7001 / 7001 W data sheet.

#### 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 78 S / ARDEX X 78 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 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 is essential. Prime tiles with ARDEX P 82. Internal dry areas only.

#### 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 78 S / ARDEX X 78 W S is suitable for fixing ceramic tiles to concrete or cement and sand screeds with underfloor heating.

#### PACKAGING

ARDEX X 78 S / ARDEX X 78 W S is packed in paper sacks incorporating a polyethylene liner - net weight 20kg.

#### STORAGE AND SHELF LIFE

ARDEX X 78 S contains a reducing agent to control the level of Chromium VI when mixed prior to use.

ARDEX X 78 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 78 S / ARDEX X 78 W S must not be used after the end of the declared storage period.

#### PRECAUTIONS

ARDEX X 78 S / ARDEX X 78 W S 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 1.6kg/litre
Working time (20°C)	approximately 30 minutes
Adjusting time (20°C)	approximately 15 minutes

#### PROPERTIES TESTED TO BS EN 12004

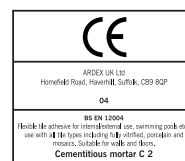
**Open Time:** approximately 20 minutes

#### Tensile Adhesion Strength:

(28 days dry)	1.0-2.0 N/mm <sup>2</sup>
(28 days wet)	1.0-2.0 N/mm <sup>2</sup>
(After Freeze-Thaw)	1.0-1.5 N/mm <sup>2</sup>
(6 hours dry)	0.5 N/mm <sup>2</sup>

#### 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.