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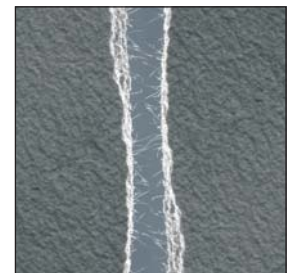
JULY 2013  
(SUPERSEDES JANUARY 2011)  
PRODUCT DATA SHEET

# ARDEX S 28 ARDEX S 28 W

## MICROTEC Rapid Hardening and Rapid Drying Semi-Pourable Natural Stone Floor Tile Adhesives

### Features

- MICROTEC fibre reinforcement for high performance
- Rapidry Formula minimises the risk of water staining, curling and warping in moisture sensitive natural stones
- Semi-pourable consistency ideal for solid bed fixing large format floor tiles and slabs
- Can be trafficked and grouted 2 hours after fixing, regardless of bed thickness
- Achieves an open time of up to 30 minutes
- High yield – 6m<sup>2</sup> @ 3mm
- Up to 60 minute pot life
- ARDEX S 28 W is ideal for fixing light and translucent marble and other types of natural stones



### RAPIDRY



Binds the mix water within the mortar, speeding drying and hardening times irrespective of application thickness



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# ARDEX S 28 / ARDEX S 28 W

## MICROTEC Rapid Hardening and Rapid Drying Semi-Pourable Natural Stone Floor Tile Adhesives

### DESCRIPTION

ARDEX S 28 and ARDEX S 28 W are rapid hardening and rapid drying tile adhesives with specific properties for fixing moisture sensitive natural stone floor tiles, as well as porcelain, mosaics, fully vitrified and ceramic tiles, in internal dry locations.

ARDEX S 28 and ARDEX S 28 W have a unique semi-pourable consistency ideal for fixing large format floor tiles.

### USE

ARDEX S 28 and ARDEX S 28 W incorporate ARDEX Rapidry Technology meaning that the mix water is totally bound into the hardened adhesive which virtually eliminates the risk of water staining of moisture sensitive natural stone tiles, or the mix water affecting wooden substrates.

ARDEX S 28 W is ideally suited to fixing translucent stones and natural stone where a light coloured background bed may be required.

The designation C2 FTE S1, in accordance with BS EN 12004, classifies ARDEX S 28 and ARDEX S 28 W as 'improved fast setting cementitious adhesives with reduced slip and extended open time.'

The additional characteristics of ARDEX S 28 and ARDEX S 28 W, determined in accordance with the test standards listed in BS EN 12004 are a tensile adhesion strength of greater than 1 N/mm<sup>2</sup> adhesion value. The mixed mortar has an extended open time of up to 30 minutes, and an easily workable, semi-pourable consistency to facilitate the solid bed fixing of large format floor tiles.

ARDEX S 28 and ARDEX S 28 W adhere 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 and surfaces to receive the tiles must be clean, firm, free of dust, dirt, oil, grease and other barriers to adhesion. Ensure that the background has adequate drying time, as given in the relevant part of BS 5385-3:2007, prior to fixing the tiles.

Install tiles 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.

ARDEX S 28 and ARDEX S 28 W can be applied to dry or moist surfaces, but moisture sensitive materials must be dry and remain dry after fixing.

### MIXING

ARDEX S 28 and ARDEX S 28 W powder is added to clean water in a clean container whilst stirring and mixed thoroughly to give a semi-pourable, 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: 3.5 parts ARDEX S 28 or ARDEX S 28 W powder to 1 part water. A 20kg bag of ARDEX S 28 or ARDEX S 28 W requires approximately 6.6 litres of water.

Do not exceed the maximum water content. 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 45 to 60 minutes at 20°C.

### APPLICATION

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 S 28 and ARDEX S 28 W are classified as having an extended open time of not less than 30 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 20 minutes, and 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 ARDEX S 28 and ARDEX S 28 W is normally hard enough after 2 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-FLEX Tile Grout. For moisture sensitive natural stones consider the use of ARDEX MG Grout to reduce the risk of picture framing and water staining.

### COVERAGE

A 20kg bag of ARDEX S 28 and ARDEX S 28 W will yield approximately 18.1 litres of mortar, using approximately 1.1kg 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, notched trowel and technique used to bed the tiles e.g. a 20kg bag of ARDEX S 28 or ARDEX S 28 W will cover approximately 6m<sup>2</sup> at 3mm thickness.

### PRIMERS

#### ARDEX P 51

Concentrated Water-Based Primer and Bonding Agent for use on absorbent backgrounds, concrete and anhydrite/calcium sulfate screeds prior to the use of ARDEX S 28 or ARDEX S 28 W adhesive. Dilute ARDEX P 51 1:3 with water.

#### ARDEX P 4

Ready Mixed, Multipurpose, Rapid Drying Primer for use on ceramic and porcelain tiles, concrete and terrazzo. ARDEX P 4 Primer is solvent free and dries after 60 minutes.

#### ARDEX P 82

Non-Flammable, Water-Based, Synthetic Primer for use on 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 S 28 or ARDEX S 28 W.

# ARDEX S 28 / ARDEX S 28 W

## MICROTEC Rapid Hardening and Rapid Drying Semi-Pourable Natural Stone Floor Tile Adhesives

### 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 curing agents and other barriers to adhesion 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 an ARDEX A 38 cement/sand screed, tiles can be fixed after only 4 hours.

#### Wood Based Sheets and Boards

Prior to tiling, ensure that new or existing boards are dry i.e. conditioned to the environment in which they will be used, and are rigidly fixed, ventilated and free from barriers to adhesion. ARDEX recommend the use of ARDEX P 51 Primer.

**NOTE:** BS 5385 advises that wood based sheets and boards should be avoided if at all possible as a background for tiling. If such boards, e.g. plywood board, chipboard, etc. have to be used, they should be restricted to small areas and installed in such a way that they provide a dimensionally stable and rigid background. The backs and edges of such boards should be treated against the ingress of atmospheric moisture that would result in movement and warping.

Since plywood and other wood based boards are not dimensionally stable, they should not be used in wet or damp conditions where they will be subjected to changes in atmospheric humidity.

#### 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 S 28 or ARDEX S 28 W.

#### 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 or ARDEX P 4 Primer.

#### Asphalt sanded (Internal Areas)

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

#### Asphalt smooth (Internal Areas)

Priming with ARDEX P 82 recommended.

#### Underfloor heating

ARDEX S 28 and ARDEX S 28 W are suitable for fixing ceramic tiles to concrete or cement and sand screeds with underfloor heating. When fixing uncalibrated stone to either concrete or cement and sand screeds the adhesive can be used up to 15mm thick.

### PACKAGING

ARDEX S 28 and ARDEX S 28 W are packed in paper sacks incorporating a polyethylene liner - net weight 20kg.

### STORAGE AND SHELF LIFE

ARDEX S 28 and ARDEX S 28 W must be stored in unopened packaging, clear of the ground in cool dry conditions and be protected from excessive draught.

If stored correctly, as detailed above, the shelf life of this product is 12 months from the date shown on the packaging.

### PRECAUTIONS

ARDEX S 28 and ARDEX S 28 W are considered non-hazardous in normal usage. The presence of cement in the product gives an alkaline mortar which may cause some local irritation if prolonged contact with the skin takes place. Care should be taken to avoid inhalation or ingestion of dust and prevent contact with the eyes.

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

### TECHNICAL DATA

Weight of fresh mortar approximately 1.4kg/litre

Working time (20°C) approximately 45-60 minutes

Adjusting time (20°C) approximately 15 minutes

### PROPERTIES TESTED TO BS EN 12004

Open Time: approximately 30 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.

Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may affect specific installation recommendations.

### TECHNICAL ADVICE HELPLINE

01440 714939

ARDEX online: [www.ardex.co.uk](http://www.ardex.co.uk)