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MAY 2015 (SUPERSEDES NOVEMBER 2014) PRODUCT DATA SHEET

# **ARDEX FA10** Rapid Setting Fibre Reinforced Levelling and Smoothing Renovation Compound

### Features

- Fibre reinforced
- Rapid setting walkable in 2<sup>1</sup>/<sub>2</sub> hours
- Ready to receive ceramic tiling after 3 hours, regardless of thickness, and resilient floorcoverings after 16 hours
- Excellent surface finish even in thinner layers
- Free flowing mortar from 1.5mm to 20mm
- Suitable for floors with underfloor heating, and can be used to encapsulate under-tile heating cables



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## **ARDEX FA10** Rapid Setting Fibre Reinforced Levelling and Smoothing Renovation Compound

#### DESCRIPTION

ARDEX FA 10 is a fibre reinforced, rapid setting levelling and smoothing compound for use on uneven and dry internal subfloors prior to the installation of ceramic/ stone tiles and resilient floor finishes.

#### USE

ARDEX FA 10 is ideal for a wide range of subfloor types including cement/sand screeds, gypsum screeds, concrete and flooring grade plywood. It can be applied up to a maximum thickness of 10mm neat in a single application, or 20mm incorporating ARDEX Coarse Aggregate. It is ready to receive ceramic and non-moisture sensitive natural stone tiling in as little as 3 hours, and resilient floorcoverings such as vinyl, linoleum, carpet etc. after 16 hours.

#### SURFACE PREPARATION

The surface of the subfloor must be clean, sound and free from dust, plaster droppings, grease, polish and any watersoftenable or loosely adhered materials. In all cases where traces of adhesive residues are present, these must be sound, hard, well adhered and unaffected by water.

Use ARDEX DGR degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to use.

Underlying plywood should be rigid, dry and able to support the anticipated loads in accordance with BS 8203 for resilient flooring and BS 5385-3 for ceramic floor tiling. When installing ceramic tiles, the backs and edges of the plywood should be sealed e.g. with a polyurethane varnish.

**NOTE:** For internal use only. When installing moisture sensitive floor coverings to direct to earth subfloors, these must have an effective damp proof membrane. If the damp proof membrane is absent or damaged, or the substrate is damp, please consult the ARDEX DPM 1 C or ARDEX MVS 95 data sheets or contact ARDEX Technical Services for further information.

#### PRIMING

ALL SURFACES MUST BE PRIMED.

Concrete, cement/sand screeds, gypsum subfloors and timber should be primed with ARDEX P 51 Primer to maintain the flow life and prevent air bubbles rising through the levelling compound. For the dilution instructions, please see the ARDEX P 51 datasheet. ARDEX P 4 Primer or ARDEX P 82 Primer is recommended for use on very smooth, dense and non-absorbent subfloors e.g. ARDEX Damp Proof Membranes and smooth power floated concrete.

#### MIXING

Use 4.1 litres of water per 20kg bag. Add the powder to the required amount of clean tap water in a clean mixing container whilst stirring thoroughly using an ARDEX mixing paddle and a variable speed electric drill. Mix until a lump free mixture is produced.

#### APPLICATION

Pour the mixed ARDEX FA 10 onto the prepared subfloor and use a steel finishing trowel or float to spread the mortar and finish off. The mixed mortar will flow out and self-smooth within the first 15 minutes of its 30 minute working time.

Apply at temperatures above 5°C. It is important to protect the freshly applied material from direct sunlight or draughts as this may cause premature drying of the material which will adversely affect the ARDEX FA 10.

**NOTE:** Do not use ARDEX FA 10 on asphalt subfloors, please consult the ARDITEX NA datasheet for advice.

Prior to levelling wooden floors, screw down and firmly fix all loose boards. Where timber floors are sufficiently rigid but are uneven or worn, or where there is differential movement between floor boards, the technique is to pre-level the timber with ARDEX FA10 and allow to dry prior to screw fixing minimum 6mm thick flooring grade plywood (such as SP101) to receive resilient flooring, or the appropriate thickness tile backing board to receive ceramic tiles or natural stone, to provide a sound and stable base for the new flooring. In all cases subfloor ventilation must be adequate to prevent deterioration and allow moisture movement. Alternatively, for flooring grade plywood which is free from barriers to adhesion, conditioned to the ambient moisture content and rigidly fixed, ARDEX FA10 may be applied as a smoothing layer up to a maximum thickness of 6mm. Allow to dry for 24 hours prior to fitting the final resilient floorcovering or ceramic/stone.

For smoothing tongue and groove floorboards, and for timber floors in conservatories or areas other than domestic locations, overlay with plywood as above or consult the ARDEX FA 20 datasheet. Alternatively, where a very thin skim of smoothing compound is required, consult the ARDEX FEATHER FINISH datasheet. Floating timber floors are not recommended as bases for rigid floor finishes such as ceramic tiles.

#### **GYPSUM (Anhydrite Screeds)**

Ensure that the screed has been applied, mechanically prepared and tested for moisture in accordance with the manufacturer's recommendations.

For guidance, the screed must contain less than 0.5% moisture content or 75% Relative Humidity. Gypsum based screeds can adversely react with cement containing materials such as levelling compounds, ceramic tile adhesives etc. The surface of the gypsum screed must be prepared to remove any weak layers or friable surface residues and an appropriate primer used to prevent the cement containing materials coming into direct contact with the gypsum screed. Therefore surface preparation using the appropriate mechanised equipment and priming is required for the successful application of any cement based material to calcium sulphate based screed. Any laitance, surface fines, etc, must be removed back to hard, dry, sound material prior to priming with ARDEX P 51 diluted 1:3 with water or, dependent of the information from the gypsum screed manufacturer, a suitably sand blinded coat of an epoxy primer such as ARDEX R3E may be required.

#### APPLICATIONS OVER UNDERFLOOR HEATING

The heated screed should have been laid in accordance with BS 8204 Part 1 and BS EN 1264. The underfloor heating system should have been commissioned in accordance with the manufacturer's instruction manual and BS 8204 Part 1 and BS EN 1264-4. Once commissioned and thermally cycled, the underfloor heating system should be turned down to room temperature but not below 15°C before the installation of ARDEX FA 10 and the final floorcovering.

The underfloor heating system should then be gradually brought up to normal operating temperature to avoid rapid thermal shock and wide temperature variations.

ARDEX FA 10 can be used to encapsulate under-tile heating cables/mats onto prepared concrete, screed, tile backing boards prior to fixing ceramic tiling.

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#### THICKNESS

ARDEX FA 10 can be applied from 1.5mm up to a maximum of 10mm neat in a single application. To utilise its free-flowing properties the minimum application thickness should be greater than 1.5mm. A minimum thickness of 3mm should be used on non-absorbent subfloors where an absorbent layer is required by the flooring adhesive.

For thicknesses from 10mm-20mm, up to half a volume of ARDEX Coarse Aggregate should be added, proportionately, dependent on depth. Mixes with high aggregate content may require a subsequent smoothing layer; in these instances, allow the first layer to dry, prime with ARDEX P 51 Primer (diluted 1:3) and then apply the smoothing layer.

#### **DRYING AND HARDENING**

ARDEX FA10 is walkable after 2<sup>1</sup>/<sub>2</sub> hours and will be sufficiently dry at 20°C and in good conditions to receive various finishes as described in the table below.

**NOTE:** Drying times are based on good ambient conditions (20°C), and can be reduced at higher temperatures and lengthened at lower temperatures.

Where the installation of the floor finish will be delayed for longer than 48 hours after initial hardening, the surface should be covered to provide temporary protection against surface damage, surface crazing, and contamination.

#### COVERAGE

A 20kg bag of ARDEX FA 10 will cover approximately  $6.5m^2$  at 2mm thick applications, using 1.6kg of powder per  $m^2$  per mm thickness.

#### PACKAGING

ARDEX FA 10 is packed in paper sacks incorporating a polyethylene liner - net weight 20kg.

#### STORAGE AND SHELF LIFE

ARDEX FA 10 contains a reducing agent to control the level of Chromium VI when mixed prior to use. ARDEX FA 10 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. Use after the declared storage period may increase the risk of allergic reaction.

**NOTE:** For the latest technical or health and safety data on this product, consult the current technical or health and safety data sheet online at **www.ardex.co.uk** 

ARDEX FA 10 - Cementitious Screed Material for use Internally in Buildings EN 13813: CT-C30-F6.

#### TECHNICAL DATA

Bulk density of powder	approx. 1.2kg/litre			
Weight of fresh				
mortar	approx. 1.9kg/litre			
Working time at 20°C	approx .30 minutes			
Compressive Strength				
After 1 day	7.0 N/mm <sup>2</sup>			
After 7 days	27.0 N/mm <sup>2</sup>			
After 28 days	35.0 N/mm <sup>2</sup>			
Tensile Bending Strength				
After 1 day	2.0 N/mm <sup>2</sup>			
After 7 days	5.0 N/mm <sup>2</sup>			
After 28 days	8.0 N/mm <sup>2</sup>			

**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 up date 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

Subfloor	Thickness	Floorcovering	Drying Time
Plywood & Gypsum screeds	Up to 6mm	Ceramic tiles, non-moisture sensitive natural stone Vinyl, linoleum, carpet etc.	24 hours
Concrete & Cement/sand screeds	3mm -	Ceramic tiles & non-moisture sensitive natural stone	3 hours
		Vinyl, linoleum, carpet etc.	16 hours
	5mm	Ceramic tiles & non-moisture sensitive natural stone	3 hours
		Vinyl, linoleum, carpet etc.	24 hours
	10mm	Ceramic tiles & non-moisture sensitive natural stone	3 hours
		Vinyl, linoleum, carpet etc.	48 hours
	20mm (with ARDEX Coarse Aggregate)	Ceramic tiles & non-moisture sensitive natural stone	3 hours
		Vinyl, linoleum, carpet etc.	72 hours