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PRODUCT DATA SHEET

ARDEX X 7 R ARDEX X 7 R W



Rapid Setting Flexible Adhesives for Floor and Wall Tiling

Features

- Walk on and grout tiles after 2 hours
- For use with all types of ceramic tiles, including porcelain
- Can be used on plywood overlay
- Suitable for use with underfloor heating
- Excellent slump resistance and application properties
- Ideal for swimming pools and wet areas
- For internal and external applications



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EMS 565427

ARDEX UK LIMITED
Homefield Road, Haverhill, Suffolk CB9 8QP UK.
Telephone: +44 (0)1440 714939
Fax: +44 (0)1440 716640
Technical Services Fax: +44 (0)1440 716663
Email: technical_admin@ardex.co.uk
ARDEX online: www.ardex.co.uk

ARDEX X 7 R / ARDEX X 7 R W

Rapid Setting Flexible Adhesives for Floor and Wall Tiling

DESCRIPTION

ARDEX X 7 R grey and white are rapid setting cement-based floor and wall tile adhesives which will allow grouting to commence after 2 hours at 20°C. They are 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, terrazzo and brick slips.

The BS EN 12004 C2 T designation for ARDEX X 7 R grey and C2 S1 for white classifies the adhesives as 'improved cementitious adhesives with additional characteristics and reduced slip'. The additional characteristics determined in accordance with BS EN 12004 are a tensile adhesion strength of greater than 1 N/mm² 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 internal and external situations, including swimming pools.

Mixed to a slump free consistency, ARDEX X 7 R/ARDEX X 7 R W has high initial grab enabling heavy wall tiles to be fixed, thus reducing or dispensing with the need for battens and spacers. ARDEX X 7 R/ARDEX X 7 R W adhere strongly to most construction materials such as concrete, cement and sand renders and screeds, heated sub-floors, brickwork and blockwork, and primed gypsum plaster, anhydrite screeds and plasterboard.

For fixing moisture sensitive natural stone and agglomerated stone tiles, use one of the specialist ARDEX Natural Stone tile adhesives and consult the ARDEX Natural Stone Fixing Guide for guidance on adhesive selection.

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. no gap under a 2m straight edge exceeds 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 7 R/ARDEX X 7 R W can be applied to dry or moist surfaces but moisture sensitive materials must be dry and remain dry after fixing.

ARDEX WPC Waterproof Coating System

Is ideal for protecting moisture sensitive backgrounds in wet locations, prior to fixing tiles. ARDEX WPC creates a waterproof protective coating that guarantees the prevention of water damage to floors and walls.

MIXING

ARDEX X 7 R/ARDEX X 7 R W powder is added to clean water in a clean container whilst stirring with a mixing paddle on a slow speed electric drill and mixed thoroughly to give a slump free, easily worked mortar. The mix proportions by volume are approximately:

3¼ parts ARDEX X 7 R/ARDEX X 7 R W powder : 1 part water.

A 20kg bag of ARDEX X 7 R grey requires up to 5 litres of water (4kg per litre of water).

A 20kg bag of ARDEX X 7 R W white requires 6.8 litres of water (3kg per litre of water).

The consistency of the adhesive can be adjusted to suit site conditions and the materials being fixed.

However, DO NOT EXCEED the recommended maximum amount of water per bag.

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 lines 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, current codes of practice recommend that 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.

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. ARDEX X 7 R grey and ARDEX X 7 R W white are classified as having an open time of not less than 20 minutes when measured in accordance with

BS EN 12004. For optimum performance under typical UK site conditions tiles should be fixed within 10 minutes and tiles can then be adjusted for up to 20 minutes at 20°C.

GROUTING

Grouting can proceed once the tile bed has hardened sufficiently so that the tiles will not be dislodged. Wall tiles can be grouted as soon as the tile bed has set and hardened sufficiently, typically after 2 hours at 20°C. When grouting floor tiles the ARDEX X 7 R 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 or ARDEX-FLEX grout mortar.

COVERAGE

A 20kg bag of ARDEX X 7 R grey will yield approximately 14.3 litres of mortar, equivalent to approximately 4.7m² solid 3mm bed of adhesive. Approximately 1.4kg powder/m²/mm. A 20kg bag of ARDEX X 7 R W white will yield approximately 16.7 litres of mortar equivalent to approximately 5.6m² solid 3mm bed adhesive. Approximately 1.2kg powder/m²/mm

PRIMERS

ARDEX P 51

The primer, diluted 1:3 with water, to use on plaster and other calcium sulphate based substrates before fixing with ARDEX X 7 R/ARDEX X 7 R W adhesive. Use undiluted when tiling on wooden sub-floors. See notes below regarding preparation of timber backgrounds.

ARDEX P 82

Non-flammable, water dispersed epoxy primer for priming internal, smooth impervious surfaces including existing ceramic tiling, internal asphalt, terrazzo, wood sub-floors, sound and well adhered paint coatings and old adhesive residues, prior to the use of ARDEX X 7 R. See note below regarding preparation of timber backgrounds.

ARDEX P 4

Ready mixed, rapid drying, moisture resistant primer for internal and external use. Suitable for a wide range of absorbent and non-absorbent surfaces including existing ceramic tiles, terrazzo, concrete, screed, renders etc.

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, curing agents, hardeners/sealers etc. are removed.

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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.

Gypsum Plaster and Gypsum Boards

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.

Paper-faced 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

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. 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.

For wall tiling 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. Tiles should not bridge joints between boards.

Existing tongue and groove softwood

Floorboards of traditional construction should be screwed or ring nailed down to the joists to provide a rigidly fixed, flat and adequately braced surface. Any existing floor polish, wax, old adhesive should be removed, e.g. by sanding to expose a clean surface prior to tiling. Plywood and flooring grade chipboard should have the backs and edges sealed, e.g. with polyurethane varnish and be at least 15mm thick and screwed or ring nailed down to the joists at 300mm centres or less.

The board surface should be clean and free of barriers to adhesion, e.g. fire retardants, impregnated wax etc. Some chipboard floor systems require the joints to be glued together and guidance from the manufacturer should be sought. The timber should be at equilibrium moisture content, i.e. the state of dryness it will attain in normal service conditions, at the time it is covered.

In all cases, the timber surface to be tiled should be stable and adequately strong and suitably rigid to withstand the imposed traffic, loads and vibration without deflection.

Extra noggins may be required between joists to stiffen floors as advised in BS 5385-3.

The timber floor surface must only be primed with either ARDEX P 51 undiluted or ARDEX P 82 primer, not other proprietary primers. Plywood walls must only be primed with ARDEX P 82 primer. Ceramic tiles should not be used on timber based boards in wet areas or external locations. Floating timber floors are not recommended as bases for rigid floor finishes.

ARDEX X 7 R/ARDEX X 7 R W must not be mixed with more than the recommended amount of water as excess moisture will cause timber movement. The adhesive bed thickness must not exceed 3mm.

NOTE: If the above precautions are not carried out there will be an increased risk of the installed tiling cracking and delaminating. For commercial installations or where the floor may be subject to vibration, e.g. from washing machines, then the use of a proprietary intermediate substrate system is recommended.

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 7 R/ARDEX X 7 R 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 have a moisture content of 0.5% or less. Prime with ARDEX P 51, diluted with 3 parts of water.

Existing 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. Use in internal dry areas only, or use ARDEX P 4 primer in damp or dry locations.

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 only.

Underfloor heating

ARDEX X 7 R/ARDEX X 7 R W is suitable for fixing ceramic tiles to concrete or cement and sand screeds with underfloor heating.

Large Format Tiles

Where larger format tiles are to be installed, a pourable adhesive, such as ARDEX X 78 S, is recommended to facilitate solid bedding. When fixing larger format tiles onto timber sub-floors the use of a pourable, rapid drying adhesive such as ARDEX X 7001 is recommended.

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 (100% contact) should be achieved.

PACKAGING

ARDEX X 7 R/ARDEX X 7 R W are packed in paper sacks incorporating a polyethylene liner - net weight 20kg.

STORAGE AND SHELF LIFE

ARDEX X 7 R grey contains a reducing agent to control the level of Chromium VI when mixed prior to use. ARDEX X 7 R 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 in ARDEX X 7 R grey (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 7 R must not be used after the end of the declared storage period.

PRECAUTIONS

ARDEX X 7 R 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.

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TECHNICAL DATA

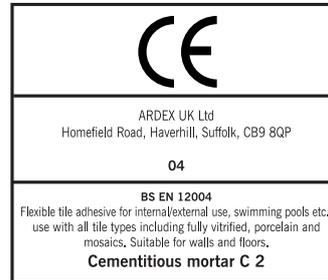
Weight of fresh mortar - grey	approximately	1.75kg/litre
Weight of fresh mortar - white	approximately	1.6kg/litre
Working time (20°C)	approximately	30 minutes
Adjusting time (20°C)	approximately	10 minutes

PROPERTIES TESTED TO BS EN 12004

Slump Resistance: Slip - less than 0.5mm

Minimum Tensile Adhesion Strength

(28 days dry)	1.0 N/mm ²
(28 days wet)	1.0 N/mm ²
(After Freeze-Thaw)	1.0 N/mm ²
(24 hours dry)	0.5 N/mm ²



TECHNICAL ADVICE

HELPLINE

01440 714939

ARDEX online

www.ardex.co.uk

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.

