



CI/SfB

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PRODUCT DATA SHEET

ARDEX EB 2

Rapid Hardening Cement for Floor Screeds

Features

Rapid setting and rapid hardening - walkable after 3 hours

High strength - 30 N/mm² after 24 hours - 58 N/mm² after 28 days

Apply as bonded, unbonded or floating screed

Ceramic floor tiles can be fixed after 3 hours on bonded screed

Can be pumped - up to 40 minutes workability

Ideal base for in situ floorings, resin toppings, etc., as a bonded screed

Dryshake/sprinkle finish to produce a wearing surface

For internal and external use



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ARDEX EB 2

Rapid Hardening Cement for Floor Screeds

DESCRIPTION

ARDEX EB 2 is a specially formulated cement for producing rapid setting floor screeds, bedding mortars and wear resistant screeds. After only one day the compressive and tensile bending strengths of an ARDEX EB 2 screed exceeds the acceptable minimum attained by normal cement/sand screeds after 28 days.

USE

ARDEX EB 2 can be used to produce bonded, unbonded and floating screeds. Bonded ARDEX EB 2 screeds can receive ceramic tiles after 3 hours at 20°C.

ARDEX EB 2 is recommended for use as a wearing floor screed when used in conjunction with 'trowelled in' wear resistant ferrous or non-ferrous aggregates. See table on the right for mix proportions and grades of sand used.

A 1:3 mix is used as a bonded screed for wearing surfaces in conjunction with 'trowelled in' wear resistant aggregate (approximately 1.5mm) and where very heavy loads/abrasion is anticipated.

A 1:4 mix is used where heavy loads are anticipated.

A 1:5 mix is suitable for all normal screeding operations to receive ceramic tiles etc.

NOTE: To apply wear resistant aggregates to the screed surface, a dry mix of 1 part of ARDEX EB 2 cement with 2 parts of wear resistant aggregate by weight should be evenly sprinkled on the screed mortar and trowelled into the surface, at the rate of 2kg/m² within the working time of the underlying screed mortar.

THICKNESS

ARDEX EB 2 cement and sand screeds should be applied at the conventional screed thicknesses in accordance with BS 8204 : Part 1.

e.g. Minimum 20mm up to 40mm for bonded screeds.
Minimum 50mm for unbonded screeds.
Minimum 75mm for floating screeds.

SUBSTRATE PREPARATION

Bonded Screeds

The concrete surface should be sound, strong, free of dust, grease, oil and other barriers to adhesion. The surface should be mechanically prepared to remove all weak or loosely adhered surface materials down to sound, well adhered aggregate. The prepared surface can be dry or damp. Apply ARDEX B2 bonding slurry cement scrubbing the slurry well into the surface prior to placing the ARDEX EB 2 screed mortar whilst the slurry is still fresh. On highly porous bases or for heavy duty industrial areas ARDEX E 100 should be incorporated in the ARDEX B 2 bonding slurry.

Unbonded Screeds

For unbonded screeds it is good practice to ensure that the concrete slab surface is reasonably true and flat prior to applying a separating or damp proof membrane.

MIX PROPORTIONS

MIX	ARDEX EB 2	SAND	WATER
1:3	50kg (2 bags)	150kg clean, screeding sand to BS 8204-1	Total water content (including water contained in sand) not to exceed 19 litres
1:4	50kg (2 bags)	200kg clean, screeding sand to BS 8204-1	Total water content (including water contained in sand) not to exceed 22 litres
1:5	50kg (2 bags)	250kg clean, screeding sand to BS 8204-1	Total water content (including water contained in sand) not to exceed 25 litres

The sand used should be good quality screeding sand. BS 8204-1:2003 recommends that screeding sands are classified to BS EN 13139. For thin bonded levelling screeds a 0/4 fine aggregate, having a fines category 1, with range MP and having a grading between 20% and 66% passing a 500µm sieve, should be used.

For levelling screeds thicker than 50mm the use of a 0/8 fine aggregate with fines category 1 with range MP should be used.

NOTE: Experience has shown that sand complying with the following grading table provides a workable screeding mortar with good compactability.

Sieve size (BS 410)	Proportion by dry mass passing nominal mesh size.
10.00mm	100%
5.00mm	90% – 100%
2.36mm	65% – 97%
1.18mm	40% – 90%
600µm	24% – 75%
300µm	8% – 40%
150µm	0% – 10%
75µm	0% – 3%

Where the screed thickness is greater than 50mm a fine concrete mix can be used by partially replacing some of the screeding sand with a suitable amount of 8mm or 10mm single sized aggregate. The optimum proportions of cement to sand, or to sand plus aggregate, should be determined within the mix proportions of 1 part ARDEX EB 2 cement with 4 to 5 parts by weight of sand or sand plus aggregate in order to obtain good workability and achieve the required soundness category.

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NOTE: The sand, fine and coarse aggregates used should not contain lime or other materials that could be detrimental to the workability of the screed mortar during application or the performance of the set and hardened screed.

MIXING

Mix the ARDEX EB 2 mortar to a workable and compactable consistency. The mixer used should be of a 'forced action' type such as a pan, trough or paddle mixer. Normal 'free-fall' mixers are not suitable for mixing screed mortars. Do not use other cements, screed additives or admixtures in the mix. Apply at temperatures above 5°C.

APPLICATION

The working time of the mixed mortar is approximately 45 minutes at 20°C, therefore mixing, placing, compaction and trowelling off must proceed without any delays. The amount of mortar mixed and the area to be screeded should be limited so that trowelling off and finishing can be completed within the working time. Where a new bay is laid against a set and hardened screed it is recommended that such daywork joints are treated with ARDEX B 2 bonding slurry and may be tied together with steel reinforcement.

To obtain maximum surface hardness and abrasion resistance the ARDEX EB 2 screed should be cured by covering with polyethylene sheet for at least 24 hours.

NOTE: Where vinyl and other floorings that require a dry base are to be applied to an ARDEX EB 2 screed, the dryness of the screed should be ascertained with a flooring hygrometer in accordance with BS 8203.

COVERAGE

1:3 mix - approximately 0.5kg ARDEX EB 2 cement per square metre per millimetre of screed thickness.

1:4 mix - approximately 0.4kg ARDEX EB 2 cement per square metre per millimetre of screed thickness.

1:5 mix - approximately 0.35kg ARDEX EB 2 cement per square metre per millimetre of screed thickness.

PACKAGING

ARDEX EB 2 powder is packed in paper sacks incorporating a polyethylene liner - net weight 25kg.

STORAGE AND SHELF LIFE

ARDEX EB 2 contains a reducing agent to control the level of Chromium VI when mixed prior to use. ARDEX EB 2 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 of the product after the end of the declared storage period may increase the risk of allergic reaction.

PRECAUTIONS

ARDEX EB 2 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.

TECHNICAL DATA

Weight of fresh mortar	approximately	2.2kg/litre
Working time (20°C)	approximately	45 minutes
Walkability (20°C)	approximately	3 hours

Compressive Strength (DIN 1164)

After	1:3	1:4	1:5
4 hours	10.0 N/mm ²	7.0 N/mm ²	6.0 N/mm ²
1 day	30.0 N/mm ²	17.0 N/mm ²	13.0 N/mm ²
2 days	44.0 N/mm ²	29.0 N/mm ²	22.0 N/mm ²
7 days	52.0 N/mm ²	40.0 N/mm ²	31.0 N/mm ²
28 days	58.0 N/mm ²	45.0 N/mm ²	36.0 N/mm ²

Tensile Bending Strength (DIN 1164)

After	1:3	1:4	1:5
4 hours	3.0 N/mm ²	2.5 N/mm ²	2.0 N/mm ²
1 day	5.5 N/mm ²	5.0 N/mm ²	3.5 N/mm ²
2 days	6.0 N/mm ²	5.5 N/mm ²	4.0 N/mm ²
7 days	6.5 N/mm ²	6.0 N/mm ²	4.5 N/mm ²
28 days	8.0 N/mm ²	7.0 N/mm ²	6.5 N/mm ²

BRE SCREED TEST

The installed ARDEX EB 2 cement/sand screed can be tested after 24 hours using the BRE Screed Tester. The depth of indentation of a correctly mixed and compacted ARDEX EB 2 screed should comply with the requirements of the floor finish and category of use, as recommended in BS 8204-1.

BRITISH STANDARD CODES OF PRACTICE

The following British Standard Codes of Practice can be referred to for advice on screeding:-

- BS 8203: Sheet and Tile Flooring.
- BS 8204: Part 1. In-situ Floorings - Bases and Screeds.
- BS 5385: Part 3. : Appendix C. Ceramic Floor Tiling & Mosaics.
- BS 8000: Part 9. Code of Practice for cement/sand floor screeds and concrete floor toppings (Workmanship on building sites).

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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.