ARDEX A 35

Rapid Setting and Ultra Rapid Drying Cement for Floor Screeds

Rapid hardening - walkable in 3 hrs

Ultra rapid drying - receives floorcoverings, including ceramic tiles, after 24 hours regardless of thickness

Apply as a bonded, unbonded or floating screed

Can be pumped for fast application

Rapid strength development

Can be used with underfloor heating systems

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ARDEX A 35

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DESCRIPTION

ARDEX A 35 is a special cement for producing a rapid setting, rapid hardening and ultra rapid drying floor screed. After only one day the compressive strength and tensile bending strength of an ARDEX A 35 screed exceeds the acceptable minimum attained by an ordinary cement screed after 28 days and is also dry, irrespective of thickness. ARDEX A 35 can be used to produce a bonded screed, an unbonded floor screed laid onto a membrane, or a floating floor screed laid onto a compressive quilt/insulating material. Bay divisions and expansion joints should be incorporated as for normal cement/sand screeds, taking into account the advice given in the code of practice for the flooring being subsequently applied. The mortar is mixed and applied in the same way as for normal cement/sand mortar, except that the working time is reduced to approximately 60 minutes at 20°C. ARDEX A 35 can be walked on 3 hours after application and is dry enough to receive floorcoverings after 24 hours at 20°C. However, where the ARDEX A 35 screed is smoothed immediately after application with ARDEX A 55 Ultra Rapid Drying Self-Levelling Compound, vinyl and textile floorcoverings may be applied after as little as 4 hours.

NOTE: Where the concrete base is insufficiently dry, or is direct to ground without an effective protection from rising damp, the ARDEX A 35 cement and sand screed must be laid over an effective damp proof membrane, e.g. ARDEX DPM for bonded screeds, or a suitable sheet membrane for unbonded or floating screeds.

USE

ARDEX A 35 is used to produce bonded, unbonded and floating screeds in internal situations where early foot traffic is required and where rapid drying is essential, e.g. to allow floorcoverings, ceramic tiles or natural stone tiles to be laid after one day irrespective of thickness. See overleaf for mix proportions and grades of sand used. A 1:4 mix is used where a very heavy duty floor is required. A 1:5 mix is suitable for all normal screeding situations. ARDEX A 35 screeds are not recommended on ground supported concrete floor slabs without an effective damp proof membrane, for use as a wearing surface, or in wet locations.

THICKNESS

ARDEX A 35 should be applied at the conventional thicknesses for normal cement/sand screeds i.e. Minimum 15mm, (design thickness up to 40mm) for bonded screeds. Minimum 50mm for unbonded screeds. Minimum 75mm for floating screeds, 65mm in lightly loaded (domestic) locations.

SURFACE PREPARATION

Bonded Screed

The ARDEX A 35 cement and sand screed can be laid as a bonded screed by applying an ARDEX A 35 grouting slurry to a dry and suitably prepared concrete base. If the concrete is not dry, 2 coats of ARDEX DPM may be used prior to applying the ARDEX A 35 screed 'fresh in fresh' in a priming layer of ARDEX R3E or a third coat of ARDEX DPM.

To prepare the grouting slurry dilute ARDEX P 51 with an equal volume of water. Mix the ARDEX A 35 cement with the diluted bonding agent to produce a creamy consistency grouting slurry.

NOTE: If the concrete base is very rough, the grouting slurry should be prepared by mixing the ARDEX A 35 cement with an equal amount of sand prior to mixing with the diluted bonding agent. The ARDEX A35 cement and sand screed mortar must be compacted onto the base 'fresh in fresh', whilst the grouting slurry is still wet and workable.

Unbonded Screed

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.

Floating Screed

For floating screeds, place a suitable separating or damp proof membrane over the insulation before applying the screed mortar. NOTE: Even an unbonded ARDEX A 35 screed can receive ceramic or natural stone tiling after 24 hours.

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MIX PROPORTIONS

Maximum 1 part weight of ARDEX A 35 screeding cement to 4 or 5 parts, depending on mix design, by weight screeding sand. The sand used should be good quality, well graded 0/8mm sand. Alternatively a 0/8mm fine aggregate with fines category 1 with range MP should be used. Experience has shown that sand complying with the following grading table provides a workable screeding mortar with good compactability.

Where the available screeding sand is good quality, but does not have the required coarse fraction, a nominal 6mm aggregate can be mixed with the screeding sand. The ratio of screeding sand to 6mm aggregate will depend upon the actual gradings involved and the workability of the mix. For example a mix of 1 x 25kg bag of ARDEX A 35 with 1 or 2 25kg bags of nominal 6mm aggregate and 3 x 25kg bags of screeding sand. Total mix water, including the water contained in the sand/aggregate should typically range from a an optimum of 10 litres up to a maximum of 11 litres per 25kg bag of ARDEX A 35 screeding cement.

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 A 35 cement with 4 to 5 (depending on mix design) parts by weight of sand or sand plus aggregate in order to obtain good workability and achieve the required soundness category.

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. Do not add any other cement or lime materials to ARDEX A 35 mixes.

Sieve size (BS 410):	Proportion by dry mass passing nominal mesh size
10.00 mm	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%

MIXING

Mix to a normal screed mortar consistency. If a mixer is used it should be of a pan, trough or other forced action type. Normal 'free-fall' mixers are not suitable for mixing semi-dry screed mortars. Use clean equipment and do not use other cements, lime or screed additives etc., in the mix.

WATER CONTENT

Add sufficient water to obtain a workable mix. With an evenly graded, fairly dry sand, the water requirement will normally be about 6-8 litres per 25kg bag of ARDEX A35. When a sample of mortar is squeezed in the hand the sample should retain its shape and not crumble, the hand being left slightly moist. When a sample is compacted on the base, no film of water should form on the surface. To achieve rapid drying and strength development, as stated, not more than 11 litres should be added (including the water contained in the sand) per 25kg bag of ARDEX A 35 cement.

APPLICATION

The working time of the mixed mortar is approximately 1 hour at 20°C, therefore mixing, placing, compaction and trowelling off must proceed without delay. 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.

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Where a new bay is laid against a set and hardened screed it is recommended that such daywork joints are vertical and treated with the grouting slurry and may be tied together with steel reinforcement. Apply ARDEX A35 cement and sand mortar at temperatures above 5°C.

Application on a floor heating system:
When an ARDEX A35 screed has been laid on a hot water floor system, 3 days should be allowed to elapse before heating up the screed to a temperature of 25°C and maintained for a further 3 days. The maximum floor temperature should then be used and maintained for a further 4 days. In doing so draughts must be avoided. The floor should then be allowed to cool down to room temperature (above 15°C) before laying floorcoverings. NOTE: ARDEX A35 screed can be thermally loaded up to 65°C.

SURFACE FINISH

For fixing ceramic tiles and quarry tiles, etc., the screed should be finished with a wood float. Prior to laying thin floorcoverings e.g. vinyl sheet, a very smooth surface may be obtained using ARDEX A 55. Alternatively prime ARDEX A35 with ARDEX P 51 and apply ARDEX K 15 NEW Sub-Floor Levelling and Smoothing Compound.

NOTE: Screeds are not designed as wearing surfaces and the screed surface should be given adequate protection once dry, gainst damage, wear and contamination during subsequent building operations. Protective covering will also minimise any curling and lipping at joints in unbonded screeds.

PUMPING

It is possible to pump ARDEX A 35 screed mixes using a proprietary screed pump. Contact our Technical Services Department for further details.

COVERAGE

Approximately 0.37kg ARDEX A 35 cement per m^2 for each millimetre of screed thickness using a 1:4 mix.

Approximately 0.31kg ARDEX A 35 cement per m^2 for each millimetre of screed thickness using a 1:5 mix.

For slurry bonding allow an extra 2 x 25kg ARDEX A 35 cement and 3 x 5kg of bonding agent ARDEX P 51 per 100 m^2.

PACKAGING

ARDEX A 35 is packed in paper sacks incorporating a polyethylene liner – net weight 25kg.

STORAGE AND SHELF LIFE

This product 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 A 35 is considered non- azardous in normal usage. The presence of cement in the product gives an alkaline mortar, which may cause some 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:	approx. 2kg/litre
Working time at 20°C:	approx. 60 minutes
Initial set (Vicat) at 20°C:	approx. 100 minutes
Final Set (Vicat) at 20°C:	approx. 160 minutes

Compressive Strength		
	1:4	1:5
After 1 day:	25 N/mm^2	23 N/mm
After 3 days:	32 N/mm^2	28 N/mm
After 28 days:	40 N/mm^2	32 N/mm

Tensile Bending Strength		
	1:4	1:5
After 1 day:	5 N/mm^2	4 N/mm
After 3 days:	6.5 N/mm^2	5 N/mm
After 28 days:	7 N/mm^2	6 N/mm

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DRYING TIME

After 24 hours suitable to receive vinyl and ceramic tiles to bonded, unbonded and floating screeds.

Moisture testing of ARDEX A 35 cement/sand screed. ARDEX A 35 is specially formulated and quality controlled to ensure that it is sufficiently dry that any floorcovering can be applied to an ARDEX A 35 screed after 24 hours regardless of thickness.

NOTE: Should the moisture need to be determined the specific properties and composition of an ARDEX A 35 screed mean that the moisture content cannot be determined with electric conductivity or hygrometer methods. The speedy moisture tester (Carbide method) must be used. Please consult ARDEX Technical Services for further advice.

SAFETY PRECAUTIONS

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. MSDS is available upon request..

DISCLAIMER

The technical datasheets are based on the latest information and given in good faith and represent the best of our knowledge and experience at the time of printing. They are primarily offered for user's consideration and evaluation. It is the responsibility of the user to conduct their own tests to validate the suitability of the products. It is also the responsibility of the user to ensure that the products are used and handled correctly and in accordance with any applicable standards, the product instructions and recommendations and only for the uses they are intended. As we have no control over site conditions and the execution of the work, we accept no liability for any loss or damage which may rise as a result thereof. We also reserve the right to update the information at any time without prior notice to you to reflect our ongoing research and development program.

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