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PRODUCT DATA SHEET

# ARDEX A 35

## Ultra Rapid Drying Cement for Internal Screeds

### Features

- Walkable in 3 hours
- Receives ceramic and natural stone tiles directly after 24 hours
- Install carpet, wood and vinyl floorcoverings after 24 hours, or just 4 hours for carpet and vinyl when smoothed with ARDEX A 55
- Passes BRE Screed (ISCR) Testing after 6 hours
- After just one day, achieves the acceptable minimum compressive and tensile bending strengths attained by an ordinary cement screed after 28 days
- For bonded, unbonded and floating screeds
- Can be used with underfloor heating systems
- Can be pumped for fast application

### RAPIDRY



What is the Rapidry Formula?

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



ISO  
9001  
Quality  
Management

ISO  
14001  
Environmental  
Management

OHSAS  
18001  
Occupational  
Health and Safety  
Management

Reg No. FM 01207

EMS 565427

OHS 628374

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# ARDEX A 35

## Ultra Rapid Drying Cement for Internal Screeds

### DESCRIPTION

ARDEX A 35 has been specially formulated to produce ultra-rapid drying floor screeds for internal locations. With 'RAPIDRY FORMULA' Technology, an ARDEX A 35 screed can be walked on just 3 hours after application and ceramic and natural stone tiles can be installed after just 24 hours irrespective of thickness. Resilient floor-coverings such as carpet, vinyl and wood can be installed after 24 hours, or if smoothed with ARDEX A 55 Ultra Rapid Drying Self Smoothing Compound, carpet and vinyl can be laid after just 4 hours.

ARDEX A 35 achieves rapid strengthening and will pass a BRE Screed (ISCR) Test after just 6 hours. After a day, it will also exceed the acceptable minimum compressive and tensile bending strengths attained by ordinary cement screeds after 28 days.

### USE

ARDEX A 35 is used to produce bonded, unbonded and floating screeds for internal locations. It can also be used for large repairs to existing cement/sand screeds. It is ideal for situations where early foot traffic and rapid hardening is required.

### THICKNESS

ARDEX A 35 should be applied to the following thicknesses:

Bonded screeds: 15mm - 40mm

Unbonded screeds: 50mm+

Floating screeds: 75mm+ or 65mm+ in lightly loaded/domestic locations

When used for screed repairs, ARDEX A 35 can be applied to the full thickness of the existing cement/sand screed.

### SUBSTRATE PREPARATION - SCREEDING

#### Bonded Screed

ARDEX A 35 can be laid as a bonded screed by firstly applying an ARDEX A 35 grouting slurry to a suitably prepared concrete base. The ARDEX A 35 screed must then be placed and compacted on the base 'fresh in fresh' whilst the grouting slurry is still wet and workable.

To prepare the grouting slurry, dilute ARDEX P 51 Primer & Bonding Agent with an equal volume of water. Then add ARDEX A 35 powder mixed with an equal volume of screeding sand with the diluted ARDEX P 51 to produce a grouting slurry of a creamy consistency.

**NOTE:** The concrete surface must be prepared using suitable mechanised equipment to expose the coarse aggregate and be free from all barriers to adhesion.

#### 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 proprietary damp proof/slip membrane. For uneven areas which require levelling or filling, consult the ARDEX A 46 datasheet for localised areas and the ARDITEX NA datasheet for larger areas.

### Floating Screed

For floating screeds, place a suitable separating or damp proof membrane over the insulation before applying the screed mortar.

**NOTE:** Where the concrete base is insufficiently dry (above 75% RH), direct to ground or ground supported without an effective damp proof membrane, or if the area is subject to rising damp, ARDEX A 35 must be laid over an effective damp proof membrane. For unbonded and floating screeds, install a proprietary damp proof/slip membrane as recommended by BS 8204-1: 2003+A1: 2009 and BS 5385-3: 2014. For bonded screeds, firstly apply ARDEX DPM 1 C/ ARDEX DPM 1 C R and allow to cure, and then apply ARDEX R 3 E Moisture Tolerant Epoxy Primer; fully sand blind whilst wet and allow to cure, sweep and vacuum clean before finally applying the ARDEX A 35 bonding slurry. Alternatively, ARDEX A 38 Ultra Rapid Drying Cement for Internal & External Screeds may be applied direct to damp concrete using ARDEX E 100 Additive for Bonding/Slurry Grouts for the bonding slurry; for further technical information, please refer to the ARDEX A 38 datasheet or contact Technical Services.

### SUBSTRATE PREPARATION - SCREED REPAIRS

Repairs should be cut back vertically to sound screed material. The cut edges should then be treated with a bonding coat of ARDEX A 35 grouting slurry; to prepare the grouting slurry, see *Bonded Screed* under *SURFACE PREPARATION - SCREEDING*. The ARDEX A 35 screed mortar should then be compacted into the bonding coat while it is still wet and workable, i.e. fresh in fresh.

### MIX PROPORTIONS

#### Sand

Mix maximum 1 part by weight of ARDEX A 35 cement to 4 or 5 parts screeding sand, depending on mix design.

The screeding sand used should be good quality 0-8mm sand and, recommended by BS 8204-1: 2003+A1: 2009, classified to BS EN 13139 standards. Alternatively, a fine 0-8mm 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.

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%

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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, however it should remain within the product's normal mix ratios e.g. 1 x 25kg bag of ARDEX A 35 to 3 x 25kg bags of screeding sand and 1 or 2 x 25kg bags of nominal 6mm aggregate.

Where the screed thickness is going to be consistently greater than 50mm, a fine concrete mix can be produced for easier compaction by partially replacing some of the screeding sand with 8mm or 10mm single-sized aggregate. To achieve good workability as well as the required soundness category, the optimum mix proportions for this application should still be determined within the product's normal mix proportions and up to a maximum of 2 parts 8mm or 10mm single-sized aggregate added to 3 parts screeding sand and 1 part ARDEX A 35 cement.

**NOTE:** Any screeding sands or aggregates used should not contain lime or any other materials that could be detrimental to the workability of the screed mortar or the performance of the set and hardened screed. Do not add any other cement or lime materials to ARDEX A 35 mixes.

### Water

Add sufficient water to obtain a workable mix. With an evenly graded, fairly dry sand, the water requirement will normally be 6-8 litres per 25kg bag of ARDEX A 35. To achieve rapid drying and rapid strength development etc. as stated, no more than 11 litres should be added per 25kg bag, including the water contained within the sand/aggregate.

### MIXING

Mix to a normal screed mortar consistency. When a sample of the mortar is squeezed in the hand, the sample should retain its shape and not crumble, and the hand should be left slightly moist. When a sample is compacted on the base, no film of water should form on the surface.

Mixing should be performed using 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

### 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 this time.

Where a new bay is laid against a set and hardened screed, it is recommended that day work joints are vertical and treated with the grouting slurry as described under SUBSTRATE PREPARATION. Apply ARDEX A 35 at temperatures above 5°C.

### Application over underfloor heating systems:

When an ARDEX A 35 screed has been laid on a hot water floor system, 3 days should be allowed to elapse before heating the water up to a flow temperature of 25°C; this should then be maintained for a further 3 days. The maximum floor temperature should then be used and maintained for a further 4 days. Throughout this time, draughts across the screed must be avoided. The floor should then be allowed to cool down to room temperature (above 15°C) before laying floorcoverings. **NOTE:** ARDEX A 35 screeds can be thermally loaded up to 65°C (water temperature).

### DRYING TIME

ARDEX A 35 can be walked on just 3 hours after application and ceramic and natural stone tiles installed after just 24 hours, irrespective of screed thickness. Resilient floorcoverings can be installed after 24 hours, or 4 hours for carpet, vinyl & rubber when smoothed with ARDEX A 55 Ultra Rapid Drying Self Smoothing Compound. The screed will be fully dry after 24 hours.

### SURFACE FINISH

Before 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 any of the ARDEX levelling compounds which should be selected with the final floor finish in mind. Please see the relevant ARDEX datasheets for further information.

**NOTE:** Screeds are not designed as wearing surfaces and the screed surface should be given adequate protection once dry against damage, wear and contamination during subsequent building operations. Protective coverings 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

Using a 1:4 mix, material requirement is approximately 0.37kg of ARDEX A 35 per m<sup>2</sup> per millimetre of screed thickness i.e. approximately 2.7m<sup>2</sup> at 25mm thick or 4.5m<sup>2</sup> at 15mm thick per bag.

Using a 1:5 mix, material requirement is approximately 0.31kg of ARDEX A 35 per m<sup>2</sup> per millimetre of screed thickness i.e. approximately 3.2m<sup>2</sup> at 25mm thick or 5.4m<sup>2</sup> at 15mm thick per bag.

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

### PACKAGING

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

# ARDEX A 35

## Ultra Rapid Drying Cement for Internal Screeds

### STORAGE AND SHELF LIFE

ARDEX A 35 contains a reducing agent to control the level of Chromium VI when mixed prior to use. ARDEX A 35 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.

**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](http://www.ardex.co.uk)

### TECHNICAL DATA

Weight of fresh mortar	approx. 2kg/litre
Working time at 20°C	approx. 60 minutes
Walkability at 20°C	approx. 3 hours

### COMPRESSIVE STRENGTH USING 0-8MM GRADED AGGREGATE

	1:4	1:5
After 1 day	25.0 N/mm <sup>2</sup>	23.0 N/mm <sup>2</sup>
After 3 days	32.0 N/mm <sup>2</sup>	28.0 N/mm <sup>2</sup>
After 28 days	40.0 N/mm <sup>2</sup>	32.0 N/mm <sup>2</sup>

### TENSILE BENDING STRENGTH

	1:4	1:5
After 1 day	5.0 N/mm <sup>2</sup>	4.0 N/mm <sup>2</sup>
After 3 days	6.5 N/mm <sup>2</sup>	5.0 N/mm <sup>2</sup>
After 28 days	7.0 N/mm <sup>2</sup>	6.0 N/mm <sup>2</sup>

### SOUNDNESS (BRE SCREED TEST)

Annex D and E of BS 8204-1 contains advice on the use of the in situ crushing resistance test on bonded, unbonded and floating screeds. The installed ARDEX A 35 can normally be tested after 6 hours using the BRE screed tester, if required. The depth of an indentation of a correctly mixed and compacted screed should comply with the requirements of the floor finish and category of use.

### MOISTURE TESTING

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 and instead the Speedy Moisture Tester (Carbide method) must be used. The DIN standard for testing cementitious floor screeds (DIN 18121-2) is to use the CM (Carbide Method) when laying moisture sensitive floorcoverings and a reading of  $\leq 2\%$  needs to be achieved. Please consult ARDEX Technical Services for further advice.

### BRITISH STANDARDS CODES OF PRACTICE

BS 8204: Part 1. In-situ Floorings – Bases and Screeds

BS 5385: Part 3. Appendix C. Ceramic Floor Tiling and 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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000005/CPR/2013 EN 13813:2002 CT-C35-F6	
ARDEX A 35 Cementitious screed material for use internally in buildings	
Reaction to fire:	Class A1 <sub>fl</sub>
Release of corrosive substances:	See MSDS
Compressive strength:	C35
Flexural strength:	F6

**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)