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PRODUCT DATA SHEET

ARDEX K 40 FLOW

Rapid Drying, High Flow Levelling and Smoothing Compound

Features

- Excellent Flow - Market Leading Workability
- Superior finish eliminates trowel marks and additional preparation when dry
- Walkable in 2 hours
- Install resilient and timber floorcoverings in as little as 6 hours
- Apply from 2mm to 20mm in a single application
- Rapidry formula, dry in 6 to 24 hours depending on thickness.



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EMS 565427

OHS 628374

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ARDEX K 40 FLOW

Rapid Drying, High Flow Levelling and Smoothing Compound

DESCRIPTION

ARDEX K 40 FLOW is an advanced high-performance levelling and smoothing compound with market leading extended wet edge and walkability time. The rapid hardening properties of ARDEX K 40 FLOW meaning that it is walkable in as little as 2 hours, and applications of up to 5mm can receive floorcoverings, including timber after 6 hours.

USE

ARDEX K 40 FLOW will level and smooth, in a single application, most new and existing internal subfloors including concrete, cement/sand screeds, anhydrite screeds, stone, terrazzo and ceramic tiles, and suitable timber floors.

SUBSTRATE PREPARATION

The surface of the subfloor must be clean, sound, and free from dust, plaster droppings, grease, polish and any water softenable 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 a suitable degreaser to remove polish, wax, grease, oil, and similar contaminating substances prior to use.

Direct to earth subfloors must contain an effective damp proof membrane. If the DPM is absent or damaged, or the substrate is damp, consult the ARDEX DPM 1 C, ARDEX DPM 1 C R or ARDEX MVS 95 datasheet for further information.

PRIMING

All surfaces must be primed to maximise the working time, maintain the flow life, and prevent air bubbles rising through the levelling compound.

Cement/sand or gypsum screeds (please check the screed manufacturers recommendations before commencing work): 1-part ARDEX P 51 Primer to 3 parts water.

Concrete subfloors: 1-part ARDEX P 51 Primer to 2 parts water.

Timber: ARDEX P 51 Primer neat and allowed to dry
NOTE: ARDEX K 40 FLOW can be applied at a maximum thickness of 6mm over Gypsum or timber subfloors.

NB: No impregnated boards should be used as this will prevent the primer from penetrating.

For further information please refer to the ARDEX P 51 datasheet. ARDEX P 4 Primer is recommended for use on very smooth, dense, and non-absorbent subfloors e.g. ARDEX Damp Proof Membranes and smooth power floated concrete.

Note: Due to the superior levelling characteristics of K40 Flow it is possible to apply the product in very thin layers, down to as little as 2mm. However, particularly for thin layers, it is important to ensure that the product is mixed with the stated amount of water and applied to a correctly primed substrate to maximise the self-smoothing properties of the product and to achieve a perfect finish.

MIXING

Use between 5¼ and 5½ litres of water per 22kg bag. For applications below 6mm we recommend using the maximum water content. Add the powder to the required amount of clean water in a clean mixing container whilst stirring thoroughly until a lump free mortar is produced. The use of an ARDEX mixing paddle with a 10mm chuck slow speed (600-1000 rpm) electric drill makes light work of mixing.

APPLICATION

Pour the mixed ARDEX K 40 FLOW mortar onto the prepared subfloor and use a steel finishing trowel or float to spread the mortar and finish off. The excellent workability of ARDEX K 40 FLOW means that fresh mixes of material can be easily trowelled into existing pre-applied material up to 30 minutes after application.

Where levelling large surface areas it may be advantageous to pump ARDEX K 40 FLOW. In domestic and light duty installations all chipboard must conform to the latest BS EN 312 standard and be of a suitable flooring grade.

The superior smoothing and levelling properties of ARDEX K 40 FLOW help to ensure the best possible finish with minimum effort.

Spike rollers may be used if preferred, but their use is not essential as an excellent finish is normally achieved with a gauging tool or a trowel depending on the depth of the application. Apply at temperatures above 5°C. Lower temperatures will extend the working time, higher temperatures will shorten the working time.

PUMPING

ARDEX K 40 FLOW may be pumped using suitable floor screed mixer pump units. For advice on pumping, including suitable equipment and techniques, please contact our Technical Support Department.

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 K 40 FLOW 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 K 40 FLOW can also be used to encapsulate under-tile heating cables/mats onto prepared concrete, screeds, and tile backing boards prior to fixing ceramic tiling.

TIMBER FLOORS

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 fixing ceramic tiles, the backs and edges of the plywood should be sealed, e.g. with a polyurethane varnish.

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 K 40 FLOW and allow to dry prior to screw fixing minimum 6mm thick flooring grade plywood 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 moisture movement. Alternatively, for flooring grade plywood which is free from barriers to adhesion, conditioned to the ambient moisture content and rigidly fixed, ARDEX K 40 FLOW can be applied from 2mm to 20mm in a single application. Tongue and groove floorboards must be 22mm thick.

For smoothing tongue and groove floorboards, and for timber floors in conservatories, or areas other than domestic locations, either overlay with plywood as above, or consult the ARDEX FA 20 datasheet.

In domestic and light duty installations all chipboard must conform to the latest BS EN 312 standard and be of a suitable flooring grade.

All boards must be secured correctly and as per the manufacturer's instructions. It is not recommended to install ARDEX K 40 FLOW onto floating chipboard floors or chipboard with or over waterfed underfloor heating system assemblies. Any movement of the board, including moisture or thermal movement, will result in cracking over the board joints.

Where a very thin skim of smoothing compound is required, consult the ARDEX FEATHER FINISH datasheet.

The chipboard should be thoroughly sanded and vacuum cleaned to remove all barriers to adhesion, including any moisture protective coatings, prior to priming with undiluted ARDEX P 51 Primer.

NOTE: If the ARDEX P 51 Primer does not soak into the boards surface due to the composition of the board, then it may not be possible to achieve adhesion. If in doubt check with the board supplier/manufacturer.

Maximum application thickness 6mm.

THICKNESS

ARDEX K 40 FLOW can be applied from 2mm up to a maximum of 20mm in a single application. A minimum thickness of 3mm should be applied on non-absorbent subfloors where an absorbent layer is required by the flooring adhesive. For thicknesses greater than 10mm, it may be more convenient to use ARDEX K 40 HB which can be applied neat up to 40mm.

DRYING AND HARDENING

ARDEX K 40 FLOW is walkable after 2 hours and layers up to 5mm are ready to receive floorcoverings after as little as 6 hours at 20°C. Layers up to 10mm thick are dry after approximately 12 hours. Applications from 10 – 20mm require approximately 24 hours to dry, depending on site conditions. Ceramic tiles and non-moisture sensitive natural stone can be installed as soon as the ARDEX K 40 FLOW is walkable, typically for moisture sensitive natural stone installations allow at least 24 hours before laying.

Where the applied mortar is subjected to rapid drying conditions, or where the installation of the floorcovering is delayed for longer than 48 hours, the surface should be covered to provide temporary protection against surface damage and contamination.

COVERAGE

When applied at 3mm thickness a 22Kg bag of ARDEX K 40 will give approximately 5m² per bag which is comparable to typical competitor products supplied in 25Kg bags which claim 5m² per 25Kg unit at 3mm.

NOTE: The coverage figure is based on a flat level surface. Additional material may be required where the surface is rough or uneven.

PACKAGING

ARDEX K 40 FLOW is packed in paper sacks incorporating a polyethylene liner -net weight 22kg.

STORAGE AND SHELF LIFE

ARDEX K 40 FLOW 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.

For the latest technical or health and safety information on this product, please visit our website www.ardex.co.uk or contact our help line for advice.

TECHNICAL DATA

ARDEX K 40 FLOW Rapid Drying, High Flow Levelling and Smoothing Compound

Bulk density of powder approx.	1.2kg/litre
Weight of fresh mortar approx.	1.9kg/litre
Working time at 20°C approx.	30 minutes
Flow life at 20°C approx.	25 minutes

Compressive Strength:

After 1 day	9.0 N/mm ²
After 7 days	29.0 N/mm ²
After 28 days	37.0 N/mm ²

Tensile Bonding Strength:

After 1 day	2.5 N/mm ²
After 7 days	6.0 N/mm ²
After 28 days	9.5 N/mm ²

EMICODE: EC1+R

(very low emission)

Suitable for under floor heating, Yes



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:
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