



Building tomorrow



March 2026
PRODUCT DATA SHEET

ARDEX FLOWPLUS

Liquid Cement Screed Additive

Features

- Single-component universal additive for producing cementitious self-levelling screed.
- Reduced Shrinkage.
- Rapid installation - up to 1,500m² per day.
- Strong and long lasting liquefaction capacity up to 120 minutes.
- Maintains a working time up to 3 hours.
- No additional curing agents needed under standard conditions.
- Excellent thermal conductivity for underfloor heating systems.
- Achieves A+ criteria for sustainability and extremely low VOC's to ISO 16000 standards.



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DESCRIPTION

FLOWPLUS Liquid Cement Screed is an all-in-one additive that creates a superior cement-based flowing screed that offers minimal shrinkage, exceptional smoothness, and removes the need for additional curing agents.

This innovative screed additive is designed to work harmoniously with your locally-sourced cement, aggregates and fillers, optimising project efficiency and sustainability. It's ideal for mobile batching plants such as TransMix or Bremat trucks, or for mixing at batching plants for delivery by ready-mix trucks.

USE

FLOWPLUS is used to produce bonded, unbonded and floating screeds for internal locations. It's ideal for large projects where areas of 1500m² can be installed in one day. It's also perfect for underfloor heating systems as it fully encapsulates heating pipes leading to increased thermal conductivity.

FLOWPLUS is suitable for both internal dry and wet areas, making it ideal for plant rooms, bathrooms, and flat commercial pool surrounds. It can also be used as an external self-compacting screed with the use of an appropriate curing agent (water-dispersed acrylic emulsion, such as Knopp MTC Curing K) to offer protection against premature drying and contraction cracks.

TYPICAL MIXING MODEL FOR 1M³

Component	Quantity
Cement	300kg
Filler (Limestone)	250kg
Sand/Aggregate (<8mm)	1,350kg
Water	280 litres
FLOWPLUS Admixture	10kg

This mixing model shows an average screed mix, the exact model will be calculated following ARDEX lab tests using the selected local materials, together with an initial test at the actual batching plant with close monitoring by an ARDEX regional representative.

FLOWPLUS leads to a large saving in water that has to be taken into account. The maximum water-cement ratio (300 L/350kg) amounts to 0.85, and despite the water savings FLOWPLUS provides outstanding liquefaction allowing for excellent processing.

If produced at a batching plant for transportation to site, it may be necessary to add additional water into the rotating drum of the mixer truck or add pure phosphate based retarders into the mix.

TECHNICAL PERFORMANCE

Component	Attribute
Walk-on Time	Approx. 24 to 48 hours
Working Time	Up to 3 hours after batching
Strength	CT-C20-F4 to CT-C30-F6
Productivity	1,000 to 1,500m ² per day
Flow	210mm to 240mm
Water-Cement Ratio	Maximum of approx. 0.85
Pull-up Strength	Approx. 1.0 N/mm ²
Shrinkage	300 to 500 µm/m (approx. 0.3–0.5 mm/m)
Thermal Conductivity	Minimum of 1.8 W/mK
Surface Regularity	SR2 to BS 8204
BRE Screed Test	After 28 days
Commission UFH	After 14 days
Fire Rating	Class A1
ISCR Category	A
VOCs	A+ criteria – extremely low VOCs to ISO 16000
Wet Density	Approx. 2.20 kg/litre
Dry Density	Approx. 2.10 kg/litre

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MOVEMENT & CONTRACTION JOINTS

Movement joints shall be provided in accordance with BS 8204-1 to accommodate thermal expansion, structural movement, and to control cracking. They are required at: door thresholds; junctions between screed areas, changes in thickness, thermal boundaries, between separate heating bays, over structural movement joints in substrate, and around columns and fixed elements.

Contraction joints (crack inducers) may be used to create controlled break lines. Where specified, cut to a minimum depth of one-third of screed thickness by trowel or early saw cutting (BS EN 1264-4). The building designer should determine joint locations and detailing in coordination with the final floor finish.

Careful consideration should be given to the positioning of movement joints based on the floor finish being installed. Please consult the relevant British Standard for the floor type selected. Additional joints must also be placed between independently controlled heating circuits, and heated and unheated screed. Structural movement joints should be followed through bonded screeds.

EDGE STRIPS

Edge strips should be used for all types of screed. Use compressible closed-cell edge strips between the screed mortar and all vertical construction elements such as walls, columns, door frames, steps, pipes and any other penetrations. Use 5–8mm strips for unheated screeds and 8–10mm strips for heated screeds. The compressibility should amount to at least 8mm, with greater compressibility required in larger areas.

DEPTHS & BAY SIZES

Application	Domestic Depths	Commercial Depths	Max. Bay Size
Floating on insulation	≥ 40mm	≥ 50mm	≤ 100m ²
Unbonded on polyethylene	≥ 30mm	≥ 40mm	≤ 100m ²
Underfloor Heating	25mm above pipes	30mm above pipes	≤ 40m ²
Bonded Thickness	≥ 20mm	≥ 20mm	≤ 100m ²

All information refers to screed with a strength of CT-C25-F5. The maximum length of any screed bay must not exceed 8m, with an aspect ratio not greater than 2:1 (length to width). For heated screeds, bays must be laid separately, and separated by movement joints. Additional joints must be placed between independently controlled heating circuits, and between heated and unheated screed areas. The maximum thickness should be no more than 80mm, as thicknesses over this could significantly impact drying times and may require additional assessment.

FLOW TEST

Before application, each FLOWPLUS mix must be tested using the standard Haegermann cone flow test to confirm that the screed has the correct consistency for workability. The target flow is 210–240mm. If the flow rate is below 210mm, add more water to the mix. If below 210mm or above 240mm, consult your screed supplier for guidance. If the client insists on adding water when the flow rate is within the specified range, they accept full responsibility for any resulting issues.

SITE PREPARATION

- Ensure substrate is properly prepared – level, clean, sound, dry and free of cracks.
- Ensure building is weatherproof with windows and doors in place. Air temperature should be maintained between 5°C and 20°C during installation and above 5°C whilst drying.
- Where applicable, the substrate must have a functioning damp proof membrane below the screed or concrete base.
- Install insulation and moisture/slip membranes with proper laps (minimum 100mm) and turn-ups at perimeter abutments for the full depth of the screed plus 25mm.
- Securely fix any underfloor heating pipes according to manufacturer's guidelines.
- Position levelling tripods spaced at 1 to 2 metres apart using a laser leveller.
- Set up adequate bay divider joints, taking into account the intended floor covering.

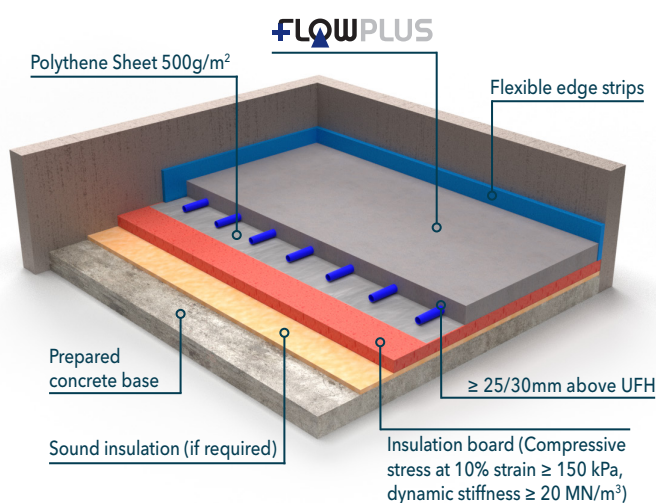
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APPLICATION TYPES

ARDEX FLOWPLUS liquid cement screed can be used for bonded, unbonded, and floating floors and especially for screed-covered underfloor heating systems as it provides full encapsulation of heating pipes, improving thermal conductivity over traditional semi-dry screeds.

FLOWPLUS OVER UNDERFLOOR HEATING



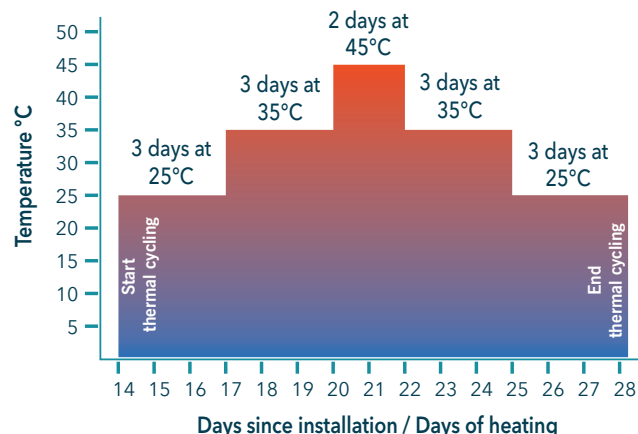
FLOWPLUS is ideal for underfloor heating applications as the flowing screed fully encapsulates the heating pipes, eliminating air voids and maximising thermal conductivity. Prior to screeding, the UFH system must be leak tested using water with the pipes filled and pressurised in accordance with the manufacturer's instructions. This verifies that the system is completely sealed before the screed is applied.

The pipes must remain pressurised (typically ~6 bar unless otherwise specified) during the pouring and curing of the screed to prevent movement, deformation or floating of the pipes.

Commissioning of the underfloor heating must not take place until the screed has undergone a minimum of 14 days curing time under normal drying conditions. The water temperature flowing through the pipes must be carefully controlled during a thermal heat cycle, as follows:

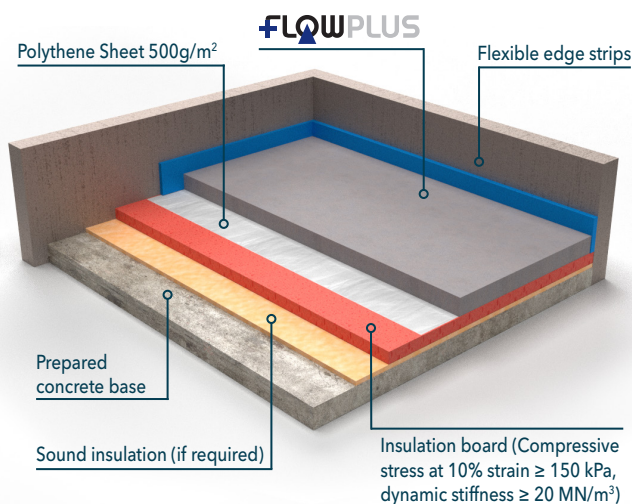
3 Days at 25°C, followed by 3 Days at 35°C, then 2 days at maximum operating feed temperature e.g. 45°C, then back down to 3 Days at 35°C and finally 3 Days at 25°C.

COMMISSIONING UNDERFLOOR HEATING



The UFH water circuit temperature must not exceed 45°C. Installation of floor finishes must not take place until the screed has undergone this thermal cycle and is completely dry.

FLOATING SCREED



Before installing FLOWPLUS, ensure that the insulation has been fully installed and secured in accordance with the manufacturer's specifications. This will provide a stable and uniform base for the floating screed construction. Install compressible edge strips at all perimeter abutments, including walls, columns and other vertical construction elements.

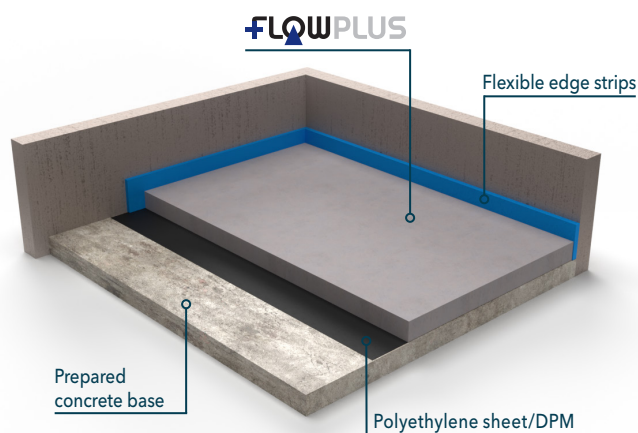
Lay the separating layer (polyethylene/DPM 500-1000 gauge) over the entire insulation surface, whether standard rigid insulation boards or thermal lightweight aggregate (TLA) insulation screed are used. Turn the

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separating layer up at all perimeter abutments to a depth equal to that of the surfacing screed plus an additional 25 mm to ensure complete isolation. Maintain an adequate overlap at all joints in the separating layer and seal the laps with appropriate tape to create a continuous barrier.

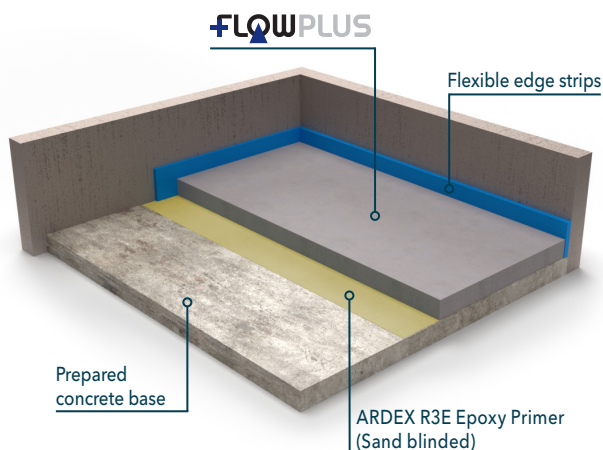
UNBONDED SCREED



The concrete substrate must be structurally sound and have adequate compressive strength. Thoroughly clean the surface, removing all debris, dust, loose material and projections that could puncture the separating layer. Seal all holes and gaps to create a uniform, smooth surface.

Lay a polyethylene sheet or DPM (minimum 125 microns/500 gauge, to BS 6515 or proprietary equivalent) over the prepared substrate. Turn it up at all perimeters to a depth equal to that of the screed plus 25mm. All joints must have an adequate overlap and be sealed with waterproof tape to ensure continuous coverage with no gaps or tears.

BONDED SCREED



Prepare all substrates using mechanised equipment, such as shot blasting, scabbling or grinding, to expose the aggregate and achieve a clean, sound surface with an adequate mechanical key. Remove all dust and fines by brushing and using industrial vacuum extraction. The prepared surface must have an appropriate texture to accept the epoxy primer and achieve full bonding.

Prime the base layer using ARDEX R 3 E epoxy primer and fully sand blind with ARDEX FINE AGGREGATE. If a liquid DPM has been used, allow a minimum of 8 hours before applying the primer. Thoroughly mix the epoxy components, then apply using a brush or roller to ensure a uniform coating. While the epoxy is still wet, broadcast ARDEX FINE AGGREGATE to refusal. After a minimum of 24 hours, remove the excess aggregate. The FLOWPLUS screed should be applied within five days of the epoxy application to ensure an optimal bond.

CURING & PROTECTION

- Close all windows and doors, especially during the first 24 hours after application, to protect from rapid drying, direct sunlight, wind, draughts and frost during the curing period.
- Maintain minimum temperature of $\geq 5^{\circ}\text{C}$ for the first 4 days after placement.
- FLOWPLUS incorporates integral curing technology that eliminates the need for separate curing membranes and curing agents under normal ambient site conditions.
- Larger and higher ceiling rooms, low relative humidity, or hot drafts increase risk of surface drying and plastic shrinkage cracks. Spray-curing with a standard concrete curing agent is recommended under these circumstances, applied immediately after dappling the screed.
- After 7 days, windows and doors can be opened intermittently to remove surplus moisture by means of draught-free ventilation.
- Do not use fans or vented dryers during the first 21 days.
- Do not install moisture-sensitive floor finishes until screed has dried to the moisture content compatible with floor finish manufacturer's requirements.
- Heavy traffic, scaffolding, and equipment from subsequent trades should be excluded for a minimum of 7 days. When access is required, distribute point loads using minimum 18mm thick plywood boards under scaffold feet, props, and equipment.
- Protect screed surface from contamination by plaster, paint, adhesives, and other materials during subsequent building operations.

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DRYING TIMES & MOISTURE TESTING

Screed drying times are strongly dependent on temperature, humidity, ventilation, screed thickness and the presence of underfloor heating. ARDEX FLOWPLUS is typically ready for careful foot traffic 24–48 hours after installation. At 50mm non-heated (20°C, 65% RH), the screed reaches 3 CM-% in approximately 14 days and 2 CM-% in approximately 28 days.

Resilient floor coverings can be applied once the screed's residual moisture content has reached 2.0 CM-% as measured by the Calcium Carbide Method (Carbide Bomb test), corresponding to approximately 75% RH.

Before applying any floor finish or ARDEX levelling compound, mechanically prepare the surface using a single-disc or planetary floor grinder fitted with fine to medium grit abrasives (60–120 grit), working in overlapping passes with light pressure and continuous dust extraction. The objective is a light cleaning grind only - sufficient to remove any surface laitance and expose a sound hard surface, without levelling or significantly reducing the screed depth. Vacuum thoroughly on completion to leave the surface hard, sound and free of dust and debris.

In situations requiring fast final floor installation, ARDEX MVS 95 Residual Moisture Vapour Suppressant may be applied when the floor registers a humidity level below 95% RH. Subsequently, ARDEX Levelling and Smoothing Compounds can be applied in as little as 2 hours, and receive the floor finish once they are dry.

WARM WEATHER INSTALLATION

- Maintain substrate and workspace temperatures between 5–30°C during installation and the first 72 hours. Do not pour when air temperature exceeds 30°C.
- Apply screed in late afternoon to benefit from cooler setting conditions.
- Shield from direct sunlight; shade windows, doors, and skylights to prevent solar heat gain.
- Protect from extreme temperature fluctuations (day/night cycles).

COLD WEATHER INSTALLATION

- Do not lay screed on frozen substrates.
- Maintain screed, substrate and ambient air temperature above 5°C during installation and for 4–5 days after.
- Protect freshly laid screed with tarpaulins, sheeting,

or thermal blankets (supported clear of surface to prevent draughts).

- Cold weather slows cement hydration reactions, allow for extended drying and strength development times.
- Communicate extended timelines to customer.

STORAGE & SHELF LIFE

- Temperature - store above 10°C, optimum viscosity at around 14°C. If stored outdoors, use heated base and thermal cover.
- Shelter - keep IBCs dry-stored and protected from direct sunlight, rain and frost. Indoor storage preferred. Outdoor storage is acceptable with appropriate thermal protection.
- Shelf life - 12 months from date of manufacture when stored correctly.
- Before use - agitate the admixture before first use and after any extended storage period.

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

Comment

The raw materials processed by us and products produced by us are subject to stringent factory inspections. No additives from other manufacturers may be used when this product is used. We therefore point out that our products and the process therefore have to be tested for their suitability for the building site conditions to be expected. The quality of the screed depends substantially on the sand and cement quality, mixing ratios and processing in accordance with the recognized rules of screed technology. Since we do not have any control over the building site conditions or the construction work, no statutory liability can be derived from this literature. With the publication of this literature all previous versions lose their validity.

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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