

FASSAFLOOR LA 8.30

DATA SHEET

Anhydrite and quartz-based self-levelling smooth coating with high thermal conductivity for the construction of low-thickness heated floor screeds indoors.



Interior flooring



By machine



Sack



Silo

Advantages

- Excellent on heating and cooling systems with low thermal inertia
- Excellent on traditional systems with reduced screed thickness
- Low thermal expansion and high dimensional stability
- Excellent mechanical strength
- Certified thermal conductivity according to EN 12664
- Special aggregates based on spherical quartz for improved fluidity and self-levelling power
- Specific heat certified according to EN ISO 22007

Composition

FASSAFLOOR LA 8.30 is a dry premix made from anhydrite, special graded aggregates and specific additives to improve workability and optimise its self-levelling characteristics.

Supply

- Loose
- special sacks with protection against moisture, approx. 25 kg

Use

FASSAFLOOR LA 8.30 is a premix specifically formulated to achieve a screed with high thermal conductivity, high mechanical strength, dimensional stability and a low coefficient of linear thermal expansion.

The presence of quartz graded sands makes FASSAFLOOR LA 8.30 a product with unique features. Thanks to its wide range of properties and the high level of purity of SiO₂, quartz is an aggregate of fundamental use in the industrial field, offering:

- greater thermal conductivity than screeds made from carbonate aggregates;
- greater hardness compared to screeds made with carbonate aggregates;
- high self-levelling power thanks to its rounded shape that contributes to improved flow and a high degree of flatness.

Specifically for:

- radiant screeds with heating and cooling systems on radiant systems with low thermal inertia;
- radiant screeds with traditional radiant systems and reduced screed thickness;
- saturation of electric heating systems;
- smoothing over non-deformable supports for the creation of milled-type radiant systems;
- low-thickness unbonded screeds on rigid, non-deformable supports for the subsequent laying of glued or floating coverings.

For indoor residential and office environments (category A and B).

Ideal for the subsequent laying of ceramic wall coverings, multilayer pre-finished wood, resilient materials (linoleum, PVC, carpet, LVT, rubber, etc.), natural stone (not to be sanded during installation) and recomposed materials.

Comply with the requirements of the main application technical standards (UNI 11493-1, UNI 11371, UNI 11515-1, UNI 10966, etc.).

Substrate preparation

In general, before the application of the radiant system, the suitability of the substrate must be checked, in particular the laying surface must be clean and free of foreign bodies, intact and mechanically resistant, dimensionally stable and not deformable, seasoned, dry (humidity less than 2% for cement substrates, 0.5% for anhydrite substrates) and free of rising damp.

All existing plumbing or electrical systems must be embedded in a compensation layer featuring suitable mechanical strength.

On damp substrates, in case of rising damp, or if moisture-sensitive coatings are to be laid later, a vapour barrier layer with Sd (equivalent air layer thickness) in compliance with the requirements of the respective application standards must be present in the layer layout.

When positioning the perimeter joint strip, if a protective film is present, any air bubbles between the radiant system and the screed must be avoided to preserve the screed's performance (refer to standard UNI 11516); lay the radiant system in compliance with the manufacturer's instructions and applicable regulations.

Place the necessary side retainers.

Smoothing adhering to the substrate

This solution is not recommended on substrates affected by rising damp. In addition to meeting the general requirements listed above, also make sure that the substrate is clean, without any oil, waxes, paints or any other element that may compromise adhesion to the substrate.

Any cracks or recasting on horizontal surfaces will be structurally sealed using FASSA EPOXY 300 epoxy sealant. In the presence of cementitious substrates with insufficient surface resistance, consider consolidation with the specific PRO-MST high-penetration product; in worse scenarios, treatment with the primer should be combined with a preliminary mechanical abrasion treatment.

Anhydrite substrates must always be adequately prepared by mechanical abrasion, so as to roughen the substrate; subsequently, after careful cleaning, make sure that the residual moisture content is lower than the set limit (from 0.2% to 0.5% depending on the use and type of subsequent covering).

Porous and absorbent cementitious or anhydrite substrates must also be treated in several coats with a suitable primer such as PRIMER DG74 diluted up to 1:1 or PRIMER AG 15 diluted at a ratio of 1:6 to 1:8 (both with water) to fix the surface and even out absorption; excessive absorption of the primer leads to a high loss of workability and may cause branching cracks to form.

For application on existing ceramic flooring, carefully map the area to make sure that the flooring is solidly fixed to the substrate. Any detached or loose parts must be removed beforehand, and the gaps filled with GAPER 3.30 or LEVEL 30. Degrease the surface and, if necessary, perform mechanical abrasion with subsequent vacuuming and cleaning, then treat with FASSAFLOOR PRIMERTEK ULTRA.

A strip of compressible material (polyethylene foam) at least 10 mm thick must be laid along the perimeter walls and in correspondence with all the above-ground elements.

Low-thickness unbonded screed

For the creation of low thickness unbonded screeds ≥ 20 mm thick, on rigid, non-deformable substrates and in the absence of underfloor radiant systems, lay a suitable separating layer, such as a polyethylene sheet, over the entire surface, taking care to overlap the joints by at least 10-15 cm and then lay the sheet on the walls up to the height of the compressible strip; seal all joints with adhesive tape. A strip of compressible material (polyethylene foam) at least 5-10 mm thick, as high as the final level of the flooring including covering, must be installed along the perimeter walls and at all above-ground elements.

Screed on radiant systems

In the case of systems with insulating panels, make sure that the panels are placed next to each other and up to the perimeter compressible strip to avoid possible percolation of the product at the joints. Make sure that there are no gaps or air pockets between the panel and the substrate, as this could cause dangerous subsidence with possible coating cracks, and that the pipe is securely fastened to the fastening system (panel, film, clips, etc.); if necessary, glue or secure the fastening system to the substrate to prevent it from rising during laying or in the first few hours after laying. As specified by standard EN1264-4, before laying the screed, the heating circuits must be checked for tightness using a water pressure test.

Mixing and application

Application thickness

Floating screed on type A radiant systems in accordance with EN 1264-4

The minimum thickness of FASSAFLOOR LA 8.30 is assessed according to the mechanical resistance of the insulating panel making up the radiant system and the intended use of the rooms; the minimum thicknesses for category A and B buildings are given below.

Type of insulating panel	Thickness above in mm
Type A - smooth panels	≥ 15 mm above pipe
Type A - shaped panels	≥ 10 mm above shaped panel for insulation with compressive strength >200 kPa
	≥ 15 mm above shaped panel for insulation materials with compressive strength >150 kPa
	≥ 20 mm above shaped panel for insulation with compressive strength <150 kPa

In all cases, the overall thickness must be between 25 and 50 mm.

Screed adhering to substrate

For smoothing on radiant systems consisting of pipes fixed on perforated films or grids without insulation to allow adhesion to the substrate, i.e. type I and J in accordance with EN 1264-4, the minimum thickness above the pipe must be ≥ 5-8 mm.

The mechanical resistance of the substrate must comply with the intended use of the flooring.

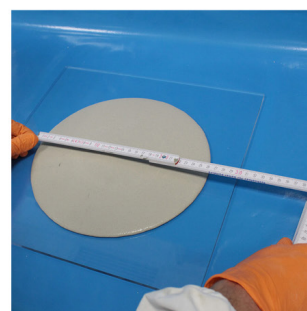
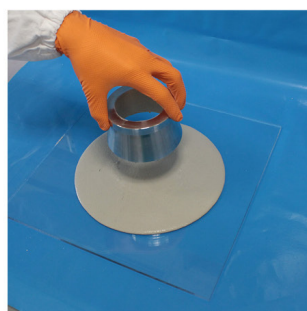
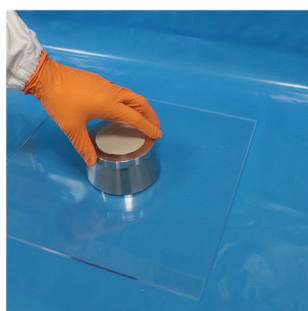
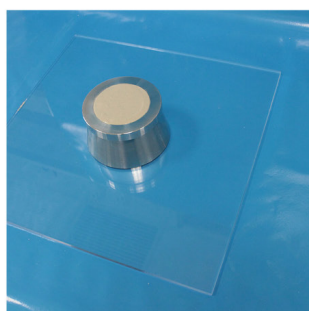
Mixing and application

Before starting the application, make sure that the substrate has been prepared according to the instructions in the "Substrate preparation" section; in particular, for adherence to the substrate, make sure that the primer is completely dry; in any case, smoothing must be carried out within 24 hours after the primer has been applied.

Use a three-phase plastering machine such as m-tech duo Mix or M330 or PFT G5 for mixing and pumping to the laying surface. These machines must be set up to allow double mixing; please contact our technical support for the use of different plastering machines. The equipment must be clean and free of residues of different materials, especially if cement-based.

For minor jobs, the product can also be mixed in clean containers with an electric mixer at low speed until a homogeneous, clog-free mixture is obtained.

Adjust the water dosage to obtain the right mix consistency depending on the application thickness; the mix should be self-levelling and homogeneous throughout the thickness. It is recommended to perform a fluidity test using the Hagerman's cone, the right consistency values range from 25-27 cm on a dry plexiglass plate. Higher values cause sedimentation of the product and a reduction in mechanical strength, especially in terms of surface hardness, as well as lengthening setting and drying times.



The product is spread starting from the thicker areas and then levelled using a levelling rod, compacting the screed a first time, then applying a second finishing coat crosswise to the first. The operations described above must be completed within the product's workability time.

Avoid air draughts and strong sunlight in the first 48 hours after application (in summer it is recommended to use dark fabrics to block sunlight on all openings). From the third day onwards, ventilate the area to assist hardening and ensure optimum drying of the screed.

Coatings can only be laid after complete drying (moisture content less than 0.2-0.5% depending on the type - see warnings); the time required depends on the thickness, type of substrate, amount of water in the mix, thermo-hygrometric conditions and air velocity. PRIMER DG74 must always be applied before applying cement-based adhesives or skim coats.

For installation of ceramic or stone coverings, it is recommended to use our AZ 59 FLEX, AT 99 MAXYFLEX, AD 8 adhesive mixed with FASSACOL LATEX S2, or, if quick-setting products are required, RAPID MAXI S1.

For laying wooden coverings, it is recommended to use our ADYWOOD 2K two-component epoxy-polyurethane adhesive, or ADYWOOD MS one-component silane adhesive for laying wooden floors, after having treated the application surface with the PRIMER ADW diluted 1:1 with DILUENTE ADW and waiting for the solvent to completely evaporate. The adhesive will be chosen according to the expected format and type of covering.

In any case, begin applying the covering only after verifying the suitability of the substrate according to the application regulations in force.



First radiant system start-up cycle

After curing for a period of at least 7 days, the system must be started in accordance with the requirements of standard EN 1264-4, or the following instructions:

- the first heating cycle starts with a water outlet temperature of 20-25°C, which must remain constant for 3 days;
- subsequently, the water inlet temperature must be increased by 5°C per day, until reaching the maximum expected operating temperature;
- this temperature must be maintained for 5 days;
- then the water inlet temperature must be reduced by 10°C a day, until reaching the initial temperature;
- during the period in which the system is started for the first time, check ventilation in the rooms so as to avoid the formation of drafts.

It is always good practice to start the system before bonding any type of flooring, in order to make any cracks appear on the screed due to accumulation of stress resulting from thermal expansion; the covering must then be laid when the screed has cooled.

Joints/maximum surface without divisions

Expansion joints must be made on the smoothing in such a way as to subdivide the surfaces into square or rectangular meshes, respecting a maximum side ratio of 3:1; as a general rule:

- they must be made at wall openings, protrusions or irregularly shaped rooms ("L", "U", "T" type, etc.);
- in the case of large surfaces, divide the surface area by making joints every 300 m² with the longest side not exceeding 16 metres;
- make expansion joints between different circuits of the radiant system or where different operating temperatures are expected;

All structural joints must be marked on the FASSAFLOOR LA 8.30 smooth coating.

For joints in areas with irregular shapes, it is recommended to follow the designer's instructions or contact Fassa Technical Service at area.technica@fassabortolo.it.

Warnings

- The application of FASSAFLOOR LA 8.30 must be carried out by qualified installers who have completed the training cycle with Fassa Bortolo technical personnel.
- Fassa cannot be held liable for any damage resulting from use that is not compliant with the datasheet or due to incorrect implementation.
- Product for professional use.
- Always consult the safety data sheet before use.
- The fresh product must be protected against frost and quick drying. Normally a temperature of +5°C is suggested as a minimum value for application and proper hardening of the product. Below this value, setting would be delayed excessively and below 0°C the fresh or partially hardened product could be broken up by frost.
- Do not use for exteriors.
- Avoid applying FASSAFLOOR LA 8.30 at temperatures above +30°C (in the summer, it is recommended to use dark fabric screens on all openings).
- Avoid strong air currents and direct sunshine for the first 48 hours after laying. From the third day, ventilate the rooms to help the floor screed to harden and dry.
- Protect the fresh screed from humidity, accidental contact with water and condensate formation using an AQUAZIP system.
- Avoid applying the product directly in contact with pure aluminium.
- Lay wooden, resilient and laminated floors only after having ascertained by carbide hygrometer that the moisture content is $\leq 0.2\%$ (in compliance with UNI 11371 and UNI 11515-1).
- For application of ceramic floor coverings on screeds enclosing underfloor heating coils, residual moisture must be $\leq 0.3\%$ (in compliance with UNI 11493-1).
- Residual moisture is measured using a carbide hygrometer only in screeds in which the presumed moisture content is less than 3%, placing a 50 gram sample and a vial of calcium carbide in the steel bottle. The reading must be made on the 50 g scale, or using the appropriate conversion scales supplied with the instrument, 20 minutes after starting the test. Electrical instruments may provide inaccurate values.

- Remember that for the installation of moisture-sensitive coverings (wood, resilient, etc.), the separating barrier must have an Sd (equivalent air layer thickness) that complies with the requirements of the corresponding application standards.
- The drying times indicated in the Technical Data table refer to reaching a residual moisture value of approximately 0.5%. To reach the lower values required by the UNI 11371, UNI 11493-1, UNI 11515-1, UNI 11714-1 standards for bonding on underfloor heating systems, the underfloor system needs to be switched on in heating mode, making sure the relative humidity in the rooms does not exceed 60%.
- Anchored smoothing with a thickness of less than 30 mm is only possible on substrates that provide a load distribution function in accordance with the intended use of the rooms.
- The specified minimum thicknesses are based on the results of point load tests carried out in the laboratory on A2 type radiant systems with EPS insulation panel with a compressive strength of 200 kPa applied on a rigid substrate. If compressible materials, such as acoustic insulation under screed or thermal insulation with different characteristics, are to be included in the layer layout, the minimum thicknesses indicated must be reassessed. Please contact our technical support in this regard.
- For all applications on underfloor heating systems with a thickness above the pipe of less than 30 mm, careful planning is required, taking into account the resistance to concentrated loads. Before laying, ensure that the layer layout complies with the radiant system manufacturer's instructions.
- If applied on underfloor radiant systems that also include cooling mode, the system must be designed and built in such a way that, when fully operational, it guarantees the absence of moisture on the surface or in interstitial spaces through the combined action of the system adjustments as specified by UNI 1264:2021 and the continuous control and regulation devices of the thermo-hygrometric conditions of the installation rooms.
- The product can be walked on after 24 hours, however, we recommend waiting at least 7 days before placing heavy and concentrated loads, especially on floating screeds.

FASSAFLOOR LA 8.30 it must be used in its original state without the addition of foreign materials.

Storage

Keep dry for a period not exceeding 12 months. Once the product has expired, it must be disposed of in accordance with the current legislation.

Quality

FASSAFLOOR LA 8.30 is subjected to accurate and constant checks in our laboratories. The raw materials used are rigorously selected and controlled.

Technical Data

Specific gravity of the powder	approx. 1350 kg/m ³
Granulometry	0-1 mm
pH	alkaline
Application thickness above pipe	8-30 mm (overall thickness between 25 and 50 mm)
Mixing water	approx. 17.5%
Yield	approx. 18 kg/m ² per cm
Shrinkage/Expansion	± 0.1 mm/m
Density of hardened product	approx. 2050 kg/m ³
Application time at +20°C	30-40 minutes
Flexural strength after 28 days (EN 13892-2) *	≥ 7 N/mm ²
Compressive strength after 28 days (EN 13892-2) *	≥ 30 N/mm ²
Thermal conductivity coefficient (EN 12664)**	λ = 1.4 W/(m·K)
Linear thermal expansion (EN 1770)	α _{-20/40} 0.013 mm/mK
Water vapour diffusion resistance factor (EN 12087)	49
Specific heat (ISO 22007-2)	736 J/kgK
Water vapour diffusion resistance factor (EN 1745)	15 wet conditions, 35 dry conditions (tabulated value)
Walkability at +20°C	approx. 24 h
Reaction to fire	A1 _{fl}
Compliant with standard EN 13813	CA-C30-F7
(*) To perform the mechanical strength and thermal conductivity tests, samples are prepared and stored under laboratory conditions in accordance with EN 13892-1.	
(**) Value certified by external body	

The above information refers to laboratory testing; it is possible that in practical applications on site these may differ considerably according to the conditions in which the material is applied. In any case the user must check that the product is suitable for the intended application, taking all responsibility for its use. Fassa reserves the right to make technical modifications without notice.

Technical specifications regarding the use of Fassa Bortolo products for structural or fire prevention applications will only be officially valid if provided by Fassa Bortolo's "Technical Service" and "Research, Development and Quality System". If necessary, contact Technical Service in your country of reference (IT: area.tecnica@fassabortolo.com, ES: asistencia.tecnica@fassabortolo.com, PT: assistencia.tecnica@fassabortolo.com, FR: bureau.technique@fassabortolo.fr, UK: technical.assistance@fassabortolo.com).

Please note that for the aforementioned products, the assessment is required by the appointed professional, in accordance with regulations in force.