FASSAFLOOR SV 472 PRO

DATA SHEET

Fibre-reinforced, fast-drying, shrinkage-controlled cement-based screed for internal and external flooring, pumpable by machine

Interior/exterior flooring

Sack

Silo

By machine

Advantages

- Practical and easy to apply
- Fast covering application
- High mechanical strength
- Suitable for underfloor heating and cooling systems
- For both renovations and new constructions
- Fibre-reinforced

Composition

FASSAFLOOR SV 472 PRO is a dry premix consisting of special binders, graded sands, non-shrink fibres and specific additives to obtain the product's fast drying characteristics.

Supply

- In bulk in silo
- Sacks with protection against damp of approx. 25 kg

Depending on the country of destination, some sales formats may not be available

Use

FASSAFLOOR SV 472 PRO is a cementitious floor screed with semi-dry consistency, quick setting and drying, used as a load distribution layer in interior and exterior environments, for laying wooden, resilient (linoleum, PVC, carpet, LVT, rubber, etc.) and stone coverings, ceramic and resin floor coverings.
Thanks to its high mechanical strength, FASSAFLOOR SV 472 PRO is suitable for the construction of floor screeds in residential and commercial environments, even those intended to receive high loads and/or in environments that are likely to be crowded, such as healthcare facilities, restaurants, schools, gyms, shops and offices.
It can be used on heating/cooling systems without requiring additional additives.
Comply with the requirements of the main application standards (UNI 11493-1, UNI 11371, UNI 11714-1, UNI 11515-1, UNI 10966, etc.).

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Substrate preparation

The application surface must be free from contaminants, mechanically resistant, dimensionally stable, cured, dry and clean.
For the construction of unbonded or floating screeds, before laying the screed, any substrates that are irregular or with significant differences in level must be levelled off the same height, by applying a levellin layer using products such as FASSAFLOOR LIGHT 300 or CALCESTRUZZO CELLULARE; any plumbing or electrical systems must also be embedded in the compensation layer.

Bonded screed (minimum thickness 2 cm)

In addition to meeting the 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. Apply a 0.5-1 cm thick strip of foam material along the perimeter walls and at junctions and then use a brush to apply a cement grout slurry to improve bonding; the slurry is made by mixing FASSACEM with AG 15 latex, diluted 1:3 with water. Apply the screed mix when the slurry is still wet.

Unbonded screed (minimum thickness 3.5 cm)

Lay a vapour barrier (thickness according to the value of S_d, equivalent air layer, required) over the entire surface of the cast, making sure to both overlap the joints by at least 10-15 cm and to fold the sheet up along the walls to the same height as the compressible strip; seal all joints with moisture-resistant adhesive tape.
Arrange, along the perimeter walls and the elements in elevation, a strip of compressible material 0.5-1 cm thick and at least as high as the finished portion of the flooring, including the finish coverings.
For both bonded floor screeds and unbonded floor screeds, welded wire mesh can be embedded at around half thickness (see the paragraph on "Warnings").

Floating screed

For screeds on thermal insulation or soundproofing systems, such as SILENS STA 10, scrupulously apply the insulating materials, following the manufacturer’s installation instructions and, as regards soundproofing, standard UNI 11516 "Installation instructions for floating flooring systems for soundproofing".
If necessary, lay a vapour barrier (thickness according to the value of S_d, equivalent air layer, required) over the entire surface of the cast, making sure to both overlap the joints by at least 10-15 cm and to fold the sheet up onto the walls to the same height as the compressible strip; seal all joints with moisture-resistant adhesive tape.
Arrange, along the perimeter walls and the elements in elevation, a strip of compressible material 0.5-1 cm thick and at least as high as the finished portion of the flooring, including the finish coverings.
The thickness of the screed must be decided based on the compressibility and thickness of the insulation, the final intended use and the type of covering used.
Furthermore, it is recommended to place welded wire mesh inside the screed (see the paragraph on "Warnings").

Floor screed with heating/cooling system

Where radiant systems are installed, make sure that all the panels are stable, bonded to the substrate and are arranged side-by-side up to perimeter compressible tape, in order to avoid thermal bridges.
As specified by standard EN 1264-4, before laying the screed, the heating circuits must be checked for tightness using a water pressure test.
Furthermore, it is recommended to place welded wire mesh inside the screed, making sure this is suitably fixed to the radiant panels. Typically, the mesh will measure 50x50 mm with a wire thickness of 2 mm, and must be interrupted at the height of the expansion joints.

Mixing

The following can be used to mix the product:
- horizontal mixer, such as FASSA MEC 30 THREE-PHASE;
- high-pressure automatic mixer;
- cement mixer;
- planetary mixer.

The loose product is supplied in a gravity silo with a sloping extraction auger (150 litres) and a flow-rate of around 150 litres/minute (about 9 cubic metres/hour with continuous operation). This greatly reduces the physical effort of the operator responsible for loading the automatic mixer and increases daily floor screed production.
Adjust the amount of water so as to obtain a mixture with "semi-wet" consistency. The correct dosage of water involves adding a sufficient liquid content to the mixture to ensure compaction; higher doses of water lengthen the product drying times, while lower doses can cause the phenomena of surface "burning effect" on the product. Users need to verify the correct dosage of water based on the type of mixing adopted and the building's temperature and humidity conditions.
Set level guides, place the screed, then carefully complete the levelling, screeding, compacting and trowelling operations, to avoid "burning effect" and a consequent decline in mechanical strength. If high thicknesses are required, lay the screed in several layers, carefully compacting each layer individually. Always embed metal mesh around pipes or membranes, ensuring these are covered by a suitable thickness. The compacted screed is then finished using a plastic float or power float. The surface must be compacted until becoming a closed-pore surface without any rising water.
If work needs to be suspended, cast the next layer by embedding reinforcing mesh or iron rods perpendicular into the screed and connecting the layers with a cement grout made by mixing FASSACEM with AG 15 latex diluted 1:3 in water, or FASSAFLOOR EPOXY REPAIR applying both while still wet.
For installation of ceramic or stone coverings, it is recommended to use our AZ 59 FLEX, AT 99 MAXYFLEX, FASSACOL EASYLIGHT S2 or AD 8 adhesive mixed with FASSACOL LATEX S2. If quick setting products are required, RAPID MAXI S1 can be used.
For laying wooden coverings, it is recommended to use our ADYWOOD 2K two-component epoxy-polyurethane adhesive, or ADYWOOD MS, single-component silane adhesive for laying wooden floors.
For laying resilient coverings, it is recommended to use our ADYTEX RS one-component acrylic adhesive, or ADYTEX 2K high-performance epoxy-polyurethane adhesive.
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 for thicknesses up to 55 mm; for every additional 5 mm in thickness, the time must be increased by one day;
- 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

- Division joints must be made on the screed (at least 1/3 of the thickness); in principle, the joints must subdivide the surface into square or rectangular sections, and must therefore be made in correspondence with openings in the walls, protrusions or areas with irregular shapes (i.e. "L" or "U" etc.).
- The joints are made by cutting the screed during application, without interrupting the reinforcing mesh embedded in the screed, if used; the mesh must be interrupted at the expansion joints on the heated floor screed or at the structural joints.
- Indoors, the maximum uninterrupted surface area should be approximately 40 m²; for unbonded or floating screeds only, with the exception of screeds with embedded heating/cooling system, when the surfaces have a regular shape (square or rectangular), these dimensions can be extended, with a maximum length ratio of 2 to 1 and the longest side not exceeding 8 metres.
- In outdoor environments, the maximum surface area must comply with the relevant application standards.
- Structural joints must be marked on the screed.

For joints in areas with irregular shapes, it is recommended to follow the designer’s instructions or contact Fassa Technical Service.

Warnings

- Product recommended for expert users.
- Always read the safety data sheet before use.
- The fresh product must be protected against frost and rapid 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.
- Avoid applying FASSAFLOOR SV 472 PRO at temperatures above +30°C.
- 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.
- Lay wooden, resilient and laminated floors only after having ascertained by carbide hygrometer that the moisture content is ≤ 2% (in compliance with UNI 11371 and UNI 11515-1).
- For application of wooden, resilient and laminated floor coverings on screeds with underfloor heating, residual moisture must be ≤ 1.7% (in compliance with UNI 11371 and UNI 11515-1).
- Lay stone coverings only after having ascertained by carbide hygrometer that the moisture content is ≤ 3% or ≤ 2% for moisture-sensitive materials (in compliance with UNI-11714-1).
- The residual humidity must be measured with a carbonate hygrometer when it is assumed that the screed humidity content is lower than 3%. For the measurement introduce a 50 gr sample in the vessel together with a calcium carbide vial. 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.
- For correct installation of ceramic flooring on any cement screed, the residual moisture content must be ≤ 3% (in compliance with standard UNI 11493-1).
- For the production of unbonded screeds on vapour barriers, intended for the subsequent application of thin coverings in general and/or resilient coverings, the minimum thickness must be at least 4 cm (in compliance with UNI 11515-1), placing metal reinforcing mesh half-way into the floor screed.
- Remember that for the installation of moisture-sensitive coverings (wood, resilient, etc.), the vapour barrier must have an S_d (equivalent air layer thickness) that complies with the requirements of the corresponding application standards.
- Depending on the intended use, useful thickness, compressibility of insulating materials, surface geometries and type of covering, evaluate whether to use welded wire mesh inside the screed. Typically, the mesh will measure 50x50 mm with a wire thickness of 2 mm, and must be interrupted at the height of the expansion joints.
- If the screed is laid on underfloor heating systems, there is no need to use fluidifying agents, since they are already contained in the product formulation.
- For laying on underfloor heating systems, a minimum thickness of 3 cm is recommended above the pipes.
- In addition to what is specified in the "substrate preparation" paragraph, it should be stressed that bonded screeds can only be made on sound, compact, crack-free substrates and with a residual moisture content below that required for applying the envisaged covering.
- For exterior screeds, the thickness of the perimeter joint must be specified by the designer and in any case must not be less than 10 mm.
- For all applications where welded mesh is to be used, FASSANET FLOOR ULTRA can replace the latter on the UK market.

FASSAFLOOR SV 472 PRO must only be used in its original state, without the addition of other materials, except for AG 15 latex and FIBER MST 20 fibres.

Storage

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

Quality

FASSAFLOOR SV 472 PRO is subjected to accurate and continuous checks in our laboratories. The raw materials used are rigorously selected and controlled.

Technical Data

Specific gravity of the powder	approx. 1,500 kg/m³
Minimum application thickness	20 mm anchored
	35 mm unbonded
Mixing water	4.8-6.8%
Yield (variable, based on the degree of compaction)	approx. 19 kg/m² with 10 mm thickness
Density of the hardened product (variable according to the degree of compaction)	approx. 2,050 kg/m³
pH	alkaline
Application time at +20°C	approx. 60 minutes
Typical drying time at +20°C and 65% RH for a 40 mm thick screed	48 hours for ceramic floors in general; 10 days at a residual humidity lower than 2%; at lower temperatures and/or higher R.H. drying time may increase
Thermal conductivity coefficient (EN ISO 10456)	λ = 1.35 W/(m·K) (tabulated value)
Specific heat (EN ISO 10456)	1 KJ/(kg·K) (tabulated value)
Water vapour diffusion resistance factor (EN ISO 10456)	60 wet conditions, 100 dry conditions (tabulated value)
Resistance to stresses parallel to the application surface (UNI 10827)	≥ 1.6 N/mm²
Flexural strength after 28 days (EN 13892-2)*	≥ 6 N/mm²
Compressive strength after 28 days (EN 13892-2)*	≥ 30 N/mm²
Walkability at +20°C	approx. 12 hours
Reaction to fire	A1 fl
Compliant with standard EN 13813	CT-C30-F6
(*) The specimens for mechanical resistance tests are prepared under laboratory conditions, using a specific procedure in accordance with the reference standard (EN 13892-1).	

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 verify 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.

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com