AGGLOTECH®
ARCHITECTURAL TERRAZZO

VERSION 3 dated 29-11-16

HIGHLY DEFORMABLE CEMENT-BASED ADHESIVE FOR PROFESSIONAL LAYING OF CEMENT-BASED AGGLOMERATES

AGGLOFIX S2

DESCRIPTION

AGGLOFIX S2 is the adhesive designed by **AGGLOTECH SPA** for laying of **AGGLOTECH** reconstituted marble-cement stone slabs; it can be used indoors and outdoors, on cement-based renders and screeds, heated screeds, even in areas subject to heavy foot traffic (museums, boutiques, large hotels, restaurants, shopping centres, offices, etc.).

AGGLOFIX S2 is a white powder adhesive, based on high mechanical strength cements and including large amounts of elasticising synthetic resins and special additives, making it highly deformable (S2) under mechanical stress.

The special additives contained in **AGGLOFIX S2** guarantee a long open time (≥ 30 minutes), ample adjustment times and excellent workability even in particularly critical conditions

AGGLOFIX S2 has been granted the **CE** mark under current standard EN 12004, as proven by test certificates issued by the laboratory Modena Centro Prove of Modena as: "**Cement-based adhesive**" (Test report 20170272/n) (**C1**), extended open time (**E**) (Test report 20170627/n), highly deformable (**S2**) (Test report 20170030/1).

PREPARATION OF SUBSTRATES

The substrates must be mechanically resistant, with no loose or flaky parts and free from grease, dust, oil, traces of gypsum, paint and parting compounds. The substrates must be cured and must have completed the hygrometric shrinkage period, be stable, free from cracks and non deformable, and must not be subject to shrinkage or structural movements after laying. Unless they have been made using special "quick-drying binders for screed" (in which case follow the manufacturer's instructions), the lower substrates must have been cured for at least one week for every centimetre of thickness, and in any case for at least 28 days.

Any uneven areas with differences of over 1 cm must be corrected with specific self-levelling or finishing products. Cement-based surfaces that are exposed to sunlight must be cooled by damping them first with clean water (eliminate any residual standing water), while anhydrite-based screeds must be perfectly dry, cured, free from dust and treated in advance using a specific synthetic primer.

PREPARATION OF THE MIXTURE

Mix with drinking water at a ratio of 22.5 ÷ 24.5% equivalent to 5.6 ÷ 6.1 litres of water to 25 kg of product. Add the powder to the liquid slowly. Mix using a drill fitted with a helical mixer, using a slow speed and stirring until the mixture is smooth and free from lumps. Let the mixture rest for approximately 5 minutes and then mix again briefly. The adhesive prepared in this way has a working time of approximately 1 hour*.

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APPLICATION

Using the smooth side of the spreader, apply a thin, even coat of adhesive mortar to the substrate, then work the product with the toothed side of the spreader.
Do not damp the slabs before laying; only if the bottom is very dusty should they be washed by "dipping" into clean water (make sure there is no residual water on the back). The slabs are normally laid by pressing down firmly, to ensure proper contact with the adhesive.
In normal environmental conditions, **AGGLOFIX S2** has an open time of over 30 minutes. However, this value may vary based on the weather conditions and the absorbency of the substrate. As a result, it is necessary to check frequently that the adhesive has not formed a surface film and that it is still fresh and sticky. If this is not the case, use the toothed spreader to mix it up again. In the case of external floors and coatings or applications carried out on windy days, or in the case of applications that are particularly difficult or involved large sized slabs, or whenever the installer considers it necessary in order to guarantee better adhesion, the **AGGLOFIX S2** adhesive must also be spread on the back of the slab (so-called "double spreading" method).

COVERAGE

When selecting the spreader to be used, the general principle to follow is that of selecting a spreader that will allow total (100%) wetting of the back of the tile. When laying small tiles on even substrates, it is recommended that you use an 8 mm spreader (coverage approx. 4 ÷ 4.5 kg/m^2). On uneven substrates it is recommended that you use a 10 mm spreader (coverage 5 ÷ 6 kg/m^2). For large sizes and when using the double spreading method, use a round toothed spreader and create layers of adhesive up to 10 mm thick; in this case the coverage is approximately 6 ÷ 8 kg/m^2.

GROUTING

The joints between tiles can be grouted after 8 ÷ 12 hours when applied to the wall and after 36 ÷ 48 hours on floors (according to the thickness involved) using specific cement-based or, if necessary, epoxy sealants, available in various colours.

CLEANING

Wash your hands and the tools used with plenty of clean water before the mixture starts to set. Cleaning after it has set is very difficult, and may require the use of mechanical systems.

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TECHNICAL INFORMATION

PRODUCT CHARACTERISTICS	
Consistency	Powder
Colour	White
Apparent density of powder	Approximately 1400 (kg/m³)
Storage	12 months in the original packaging in dry environment
Customs classification code	3824 5090
APPLICATION INFORMATION	
Mixing ratio	100 parts by weight of adhesive with approximately 26 parts water, equivalent to approximately 5.25 ÷ 6.75 litres per 25 kg bag
Consistency of the mixture	Very pasty and thixotropic
Volume mass of the mixture (kg/m3)	approx. 1550
pH of mixture	Approximately 13
Application temperature	From + 5°C to + 35°C
Open time (EN 1346)	≥ 30 minutes*
Adjustment time	Approximately 45 minutes*
Grouting on walls	8 ÷ 12 hours*
Grouting on floors	36 ÷ 48 hours* according to thickness applied
Foot traffic	36 ÷ 48 hours* according to thickness applied
Ready for normal use	14 days*
FINAL PERFORMANCE LEVELS	
Adhesion (under EN 1348)	
- Initial adhesion	≥ 1 N/mm²
- Adhesion after heat ageing	≥ 1 N/mm²
- Adhesion after water immersion	≥ 0,5 N/mm²
- Adhesion after frost/thaw cycles	≥ 1 N/mm²
Deformability (under EN 12002)	≥ 5 mm (Highly deformable S2)
Resistance to alkalis	Excellent
Resistance to oils	Excellent (poor for vegetable oils)
Resistance to solvents	Excellent
Working temperature	From -30° C to +90° C
COVERAGE	
Small sizes on even substrates	4 ÷ 4.5 kg/m²
Uneven substrates	5 ÷ 6 kg/m²
Large sizes with double spreading	6 ÷ 8 kg/m²

*Values measured at (23±2)°C and (50±5)% relative humidity.

REGULATORY COMPLIANCE	
EUROPEAN STANDARD EN 12004	**AGGLOFIX S2** complies with the requirements of class **C1E S2**

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HEALTH AND SAFETY

EUH 208 Contains cement. May cause an allergic reaction. The product is non-toxic, but the Portland cement it contains may cause skin irritations and serious injury to the eyes. Do not breathe the dust, keep rooms ventilated while mixing and use suitable protective devices such as gloves. protective clothing and goggles. Before use, read the information on the pack carefully and consult the Safety Data Sheet. Cr VI content less than 2 p.p.m.

STORAGE

- Store the product in its original packaging, unopened, in a dry place. Do not disperse the powder.
- According to Italian Ministerial Decree 10-05-2004 the product, when properly stored, must be used within 12 months of the date of packaging printed on the bag.

PACKS

25 kg paper bags on 1500 kg disposable pallet.

GENERAL RECOMMENDATIONS

- For large size materials (> 40 x 40 cm) it is always recommended that the so-called "double spreading" method be used: as well as applying the adhesive on the substrate using a toothed spreader, spread a light coat of adhesive on the back of the slab as well. When laying outdoors, regardless of the size of slab being laid, the "double spreading" method must always be used.
- The presence of rising damp from the substrate may cause problems for the material that is laid.
- Adjacent laying with no joints is never recommended, and should be avoided.
- The width of the joints must be decided by the designer based on the size of material being laid, the size of the rooms and whether or not there are any fractionizing joints, taking into account all the hygrothermal variables (for example whether underfloor heating systems are installed).
- Any joints that may be present in the structure must always be respected.
- The need to fractionize the surface using expansion joints must be evaluated by the designer, according to the regulations in force locally.
- A special compressible tape with a minimum thickness of 10 mm must be applied to the entire laying perimeter and any columns, pipes or other structures.
- When laying over old existing floorings it is essential that the substrate be cleaned thoroughly using specific degreasing products (or caustic soda); in rooms with dimensions of over 20 m2 the substrate must be pre-treated by applying a specific synthetic primer.
- Please contact our technical department when laying over underfloor heating screeds or outdoors, or whenever you require to do so.

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WARNING

Mix with drinking water without adding other products. Particularly absorbent substrates must first be damped or pre-treated with a specific primer. When laying on gypsum or anhydrite based substrates and on ready-mixed gypsum-based plasters, first apply a coat of specific synthetic primer. Do not apply in direct sunlight, on frozen substrates or when the surrounding temperature is lower than +5°C or higher than +35°C, or when there is a risk of night frost. Do not wet the adhesive when a surface film has formed, as the additional water, instead of dissolving it, forms another anti-adhesive film. Any adjustments to the coating must take place within 45 minutes* of laying, after which they are a problem. Protect the mortar that has been applied from rain, running water or frost, and from rapid drying due to wind or direct sunshine. ***Use a waterproof plastic sheet to protect the material that has been laid for at least 48 hours.***

AGGLOFIX S2 adhesive **cannot be used** in the following cases:

- On uncured substrates or substrates subject to deformation.
- On metal, PVC, rubber or linoleum, wooden, painted surfaces.
- For laying operations that require an adhesive thickness of over 10 mm.
- When rapid access to foot traffic is required.

THE PRODUCT IS RECOMMENDED FOR USE BY PROFESSIONALS ONLY

The indications provided above derive from our best experience at this time. However, as work site conditions may vary considerably, we recommend that the user carry out practical tests to ensure that the product is suitable for the use required, and that the user take responsibility for the results of that use.

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