

BLOCK

Plaster mortar with offset withdrawal for the fastening of machinery and structural elements of steel and reinforced concrete



Product description

GALILEO BLOCK is a premixed mortar, cementous, mono-component, with offset withdrawal, of fluid consistency, applicable by adhesion up to 5 cm. thickness.

GALILEO BLOCK complies with class R4 according to UNI EN 1504-3 and complies with UNIE EN 1504-6.

Supply and Storage

Packaging: 25 kg. bag (60 bags pallet - 1.500 kg.)

Consumption: approx. 18 kg/sqm per cm thickness.

GALILEO BLOCK is available in special paper and high-density and thickness polyethylene bags that allow for the product to be stored in a dry place for at least 8 months, without loss of performance characteristics and in particular those related to expansive capacity.



Surface Preparation and Application

Before the application, it is necessary to remove the damaged and/or inconsistent concrete from the foundation, to eliminate any roes of cement, and any traces of oil, grease, dust and pollutants in general, either from the concrete area or from the metal surfaces that will be incorporated (stud bolts, bolts and plates). Thus, a strongly roughened surface will be obtained, which will be fully saturated with water, eliminating any areas of stagnation. In the absence of pre-defined wells, it is required to prepare molds to contain the fastening mortar. These should be non-absorbent and able to counteract the expansion of the cast material, while ensuring that there is no leakage of material, especially in the areas of interface between the mold and the foundation. For this, they should be fixed in order to avoid movements during the curing of the mortar. We recommend leaving 5-10 cm. of space between the mold and the edge of the fastening plate to facilitate the outflow of the product and its leveling. This space will be increased on the side from which the material is cast. The mixing of GALILEO BLOCK must be done in mixer or with a power drill (carefully avoiding excessive incorporation of air). Always pour the water first (4/5 of total) and then, gradually, the powder. After an initial mixing, check that there is no scattered dust on the walls and add the remaining water quantity and mix to obtain a homogeneous mixture, free of lumps and with a smooth texture. GALILEO BLOCK should be mixed with water at a rate of approx. 16-17 liters per 100 kg of powder (about 4 to 4.3 liters per 25kg bag). During the casting and the subsequent hardening phase (up to the first 24 hours after casting, at a temperature of 20°C) ensure that there are no vibrations that could be transmitted to the item to be fastened. The mortar cast should always be done from the same side and, except for the

cases of particularly large projects, there is no need to prepare joints. In the case of large surfaces, should the need occur, it might be useful to lubricate the surface with an initial, smoother cast (no more than extra 5% of water). Always check the optimal filling with a tube (a rubber or copper tube) which, inserted between the plate and the foundation, should not present different resistance to penetration. Never shake the cast, in order to avoid formation of air bubbles that might be difficult to expell. GALILEO BLOCK must be applied at a temperature between 5°C and 30°C; in case of low temperatures (5°C to 10°C), it is recommended to mix the material with warm water (30°C to 40°C). Conversely, if ambient temperatures are high, it is recommended to mix the material with cold water. In case of application at low temperatures (<10°C), mechanical performance may develop somewhat slower. The cast areas exposed to air should be protected, at least for the first 24 hours, by humidifying or by applying wet coatings or nylon. This is necessary in order to promote the correct offset withdrawal function of the material and to prevent the appearance of any superficial cracks. The remote possibility that such superficial cracks might still appear does not affect the fastening properties guaranteed by the material. For applications with thicknesses > 50 mm it is expected to add washed gravel (8-12 mm) in proportion equal to 30% compared to the weight of the powder (100 kg GALILEO BLOCK -> 30 kg of gravel).

Fields of use

GALILEO BLOCK has been designed specifically for operations of fastening machinery in foundation, such as motors, mechanical equipment, presses, turbines, even those subject to dynamic loads and/or vibration. It is also indicated for the anchorage of crane tracks or crane bridges and for the attachment of structural elements in reinforced concrete or steel.

Technical data

Water in the mix	ca. 16%
Fresh volume mass	ca. 2200 Kg/m ³
Fluidity (spreadng)	> 250 mm
Particle size	3 mm
Resistance to compression UNI EN 196/1	1g: > 30 MPa 7gg: > 60 MPa 28gg: > 75 MPa
Resistance to flexion UNI EN 196/1	1g: > 7 MPa 7gg: > 10 MPa 28gg: > 11 MPa
Water impermeability	< 0,5 kg*m ² *h ^{-0.5}
Elastic module UNI 6556 (28 days)	ca. 30.000 + 3000 MPa
Adhesion to concrete UNI EN 1542	≥ 2 MPa
Contrasted expansion (UNI 8147)	1g > 0,03%
Consumption	approx. 18 kg/m ² per cm thickness
Fenomeni di bleeding (UNI 8998)	absent
Resistance to unthreading of steel bars	< 0,6 mm with a load of 75 kN
Thermal compatibility	part 1 - part 2 - part 4 ≥ 2 MPa
Hazardous substances	see SDS
Reaction to fire	class A1

Laboratory analysed performances, in standard humidity conditions (20°C and 95% average humidity)