



MICROSTANDARD

Special multifunction additive of micro-silicates, for special concretes

DESCRIPTION

MICROSTANDARD is a special "additive", compound, multi-functions (UNI EN 206- 1:2006, 3.1.23, type II: pozzolana additives) able to product interesting transformations in cement pasta, in structure and concrete performance. **It is the first , historic product of Betonsafe line, from which all the studies about the most performing Microplus began and have been done.** MICROSTANDARD is most made by thickened reactive micro-silicates, selectioned sands of very thin granules, glass alkaline resistant fibres and polypropylene multi-fibres. The reactive fillers present in MICROSTANDARD determine a high effect of cohesive thickening of conglomerate and great linking increasing of concrete, in a mix able to maximize the functions of fibres dissolved in it. For this reason, the concrete with Microplus can be considered a compound material, fibro-reinforced of elevated quality.

PECULIAR ASPECTS AND RHEOLOGICAL EFFECTS

The specific surface of the main component of MICROSTANDARD, in order to 20-22 m²/gram, valued with UNI EN 196-5 (in concrete for instance, is about 0,5 m²/gram) determines the very elevated, hydraulic and pozzolana efficiency of MICROSTANDARD, as the special composition of this fibres mix fills the gaps of concrete, making it more cohesive and reducing segregation and bleeding.

CHEMICAL-PHISICAL EFFECTS

In a ordinary Portland concrete the 20% of hydration products is made of free lime or calcium hydroxide Ca(OH)₂, which represents the most soluble and unstable element of the concrete, without effective and mechanical resistances. The pozzolana reaction, obtained with the addition of MICROSTANDARD, is the most effective mean able to cancel or reduce drastically the negative influence of the free lime, giving stable and insoluble conglomerates at elevated durability. The further effects of elimination or reduction of free lime, produced by the active components of MICROSTANDARD, can be summarized with:

- drastic reduction of porosity
- significant increase of mechanical final resistances, specially long-term
- extraordinary increase of inherent impermeability, specially in case of 2 sacks dosage 25 kg/m³ each of Concrete.

HOW IT IS USED

MICROSTANDARD must be simply addicted to a correct made up concrete, following the current provisions in particular with UNI EN-1:2006 "Concrete, specification, performance, production and conformity", in function of a specific way of use, atmosphere of exposition and the values of consistence deriving from the way of installation. The addition of MICROSTANDARD determines sensible increase in mix cohesion. So the basic concrete must be planned and/or ordered to the plant, with a degree superior consistence class as expected originally. The correct mix and the homogeneous distribution of MICROSTANDARD with the components of concrete are fundamental presuppositions. It must be given a particular attention to prolonged mix, until the safe elimination of lumps. MICROSTANDARD can also be added as in the batching plant, gradually distributing on the conveyor belt of aggregates, as in

the truck mixer in the erecting yard. In the second case the following empiric rule can be taken in consideration: 1' of mix at the highest speed of rotation of mixing drum, for every cube meter of concrete. The concrete with MICROSTANDARD can be considered a high quality concrete, but it requires the usual cunnings of a good practice in making up, mixing, transport, laying and seasoning. The last one must be particularly accurate and prolonged. The concrete with MICROSTANDARD can be easily transported and lain by a pump and in the most cases the addition of MICROSTANDARD makes easy transportable with pump even the most difficult concretes.

USE FIELDS

The classical use field of MICROSTANDARD is certainly represented by the making up of concretes at elevated impermeability, anti-washing, at elevated containing of micro-clefts, suitable for the building of impermeable and durable structures: tanks, basins, pavements, tunnels, arcades, dams ,foundation works, stalls, containing walls, silted up parking etc. The extraordinary characteristics and peculiarity of MICROSTANDARD allow to define special finalized concrete categories too, suitable for solving complex problems in building trade as civil as industrial, identified in function of changes to introduce to the recipe of making up, originally defined for the specific structure, for the making up of 1 m³ of concrete , except to indicated in UNI EN 206-2006, regarding the specific qualities of conglomerate. The performances of MICROSTANDARD referred to basic concrete can be so summarized:

Impermeability from stratum water:

- the foundation mat until the height of extrados of the mat with the dosage of 25kg/m³ (n.1 sack)
- the foundation mat until a maximum of m.1 over the height of extrados of the mat with a dosage of 25 kg/m³ (n.2 sacks)

Solve or drastically reduce:

- the effects of capillary going up, as on elevation walls, as on foundation mat
- the permeability of elevation walls in contact to permeation water

Increases the resistance in industrial pavements in concrete:

- in intense cold and to thawing salts
- to chemical attacks

PACKAGE

sack 25 kg - pallet 1250 kg

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