

Super plasticizer and a high range water reducer for concrete

DESCRIPTION

HI-CONTECH 1000, is a dark colored ready to use super plasticizer based on synthetic polymers with high molecular weight and increased fluidifying power.

It accelerates the initial setting time, lowers the w/c ratio and improves the properties of fresh and hardened concrete.

STANDARDS

ASTM C-494 Typ F ; TS EN 934-2

FIELD OF APPLICATION

HI-CONTECH 1000 can be used on all types of high quality concrete where high early mechanical strength and significantly lower w/c ratio is need.

Due to ti's high quality characteristics, HI-CONTECH 1000 is particulary indicated for use in concrete mixed on site or ready-mixed concrete transported by mixer trucks where high initial strenths are needed.

ADVANTAGES

HI-CONTECH 1000 is a super plasticizer and within a dosage range from 0.4 – 2.0 %, the following can be obtained;

- *Concrete with an improved w/c ratio (water reduction of 20 – 30 %)
- *Waterproofing concrete.
- *Non segregation, fluid,plastic concrete without bleeding.
- *Homogeneous and cohesive concrete.
- *Easily pumped concrete with good workability and with good finishing.
- *Durable and highly impermeable concrete.
- *Improved properties of fresh and hardened concrete.
- *Concrete with high initial and final strengths.

COMPATIBILITY

HI-CONTECH 1000 is compatible with the following;
*All Portland and other types of cement in accordance with ASTM standards.

*Air entraining admixtures.

*EXPAN non shrink agents.

*Fly ash.

*Polypropylene and steel fibers.

MECHANICAL STRENGHTS

Compared to a concrete without the admixture, the use of HI-CONTECH 1000 in concrete will result in an increase in the mechanical strenght, in proportion with water reduction,in some cases,by 100%.

With the use of HI-CONTECH 1000,high initial and ultimate mechanical strengths will be evidenced.

Because of the reduction in the water/cement ratio, increased resistance and durability,lower shrinkage and permeability will be obtained.

DOSAGE AND USE

The dosage of HI-CONTECH 1000 is 0.4 – 2.0 kg for every 100 kg of cement, to be added in mixer with the last mix water.

(after 70% introduction of the mix water)

The addition of admixture on dry aggregates and cement is not recommended since it lowers the plasticizing and water reducing effect.

WORKABILITY

Workability time after the use of HI-CONTECH 1000 in the concrete depends on the applied dosage,type and dosage of cement and aggregates and ambient temperature.

In general, the extended workability time after the addition of the admixture,is about < 90 min.at 20°C
The loss of workability is gradual and only practical site tests will specify the workability.