

High performance super plasticizer for self compacting concrete

DESCRIPTION

HI-CONTECH 1200, is a high performance super plasticizer based on polycarboxylic technology where high early strength and ultimate concrete performance with self compacting properties is need.

STANDARDS

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

FIELD OF APPLICATION

HI-CONTECH 1200 can be used on all types of high quality concrete where self compacting properties with high mechanical strength and significantly lower w/c ratio is need.

Due to ti's high quality characteristics, HI-CONTECH 1200 is particularly indicated for use in concrete mixed on site or ready – mixed concrete transported by mixer trucks where work and climate conditions require workability retention.

ADVANTAGES

HI-CONTECH 1200 is a carboxylic ether polymer based super plasticizer and within a dosage range from 0.6 – 1.5 %, the following can be obtained;

- * Concrete with an improved w/c ratio (water reduction of 25 – 40 %)
- * Waterproofing concrete.
- * Non segregation,fluid,plastic concrete without bleeding.
- * Self compacting concrete.
- * Concrete casting in cold climates.
- * 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 1200 is compatible with the following;

- * All Portland and other types of cement in accordance with ASTM standards.
- * Air entraining admixtures.
- * Silica fume..
- * Fly ash.
- * Polypropylene and steel fibers.

Do not use with other types of concrete admixtuers.

MECHANICAL STRENGHTS

Compared to a concrete without the admixture, the use of HI-CONTECH 1200 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 1200,high 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 1200 is 0.6 – 1.5 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 1200in the concrete depends on the applied dosage,type and dosage of cement and aggregates and ambient temperature. In general, the exented workability time after the addition of the admixture, is about < 120 minutes at 20°C.

The loss of workability is gradual and only practical site tests will specify the workability.