BCI BUILDING CHEMISTRY INDUSTRY

BC tec 505 TP

Description:

BC Tec 505 TP is a high range water reducing, high slump retaining and retarding super plasticizing admixture. Slump retention properties specially designed for long distance transportation and discharge of self leveling ready-mixed concrete applications.

Features:

Self leveling concrete without increasing water content High strength concrete at low water cement ratio Concrete with BC Tec 505 TP maintains the self leveling properties form 4-2 hours at ambient temperature Greatly reduces water requirements Reduces segregation and bleeding in the plastic concrete Reduces cracking and permeability of hardened concrete When used to produce "flowing" concrete, significantly reduces concrete placement time and cost.

Basic uses:

Ready –Mix concrete Reinforced concrete Industrial slabs High strength concrete Pre stressed concrete Parking structures Water tight concrete

Specifications:

BC Tec 505 TP meets or exceeds the ASTM C494 Type D and G requirements.

Technical information:

The following results were developed under laboratory conditions:

Specific Gravity	1.23 at 25 deg C
Mix Design	400 kg/m3
Finer aggregate	40 %
Chloride Content	Nil
Coarse aggregate	60 %

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Compressive Strength vs. Control :

Duration	Value for control	Value for sample
1 day		Up to 140%
3 days	Up to 140%	160%
7 days	130	150 %
28 days	125	135 %

Directions for use:

The normal addition rate of BC Tec 505 TP is 0.60 liters to 1.5 liters per 100 kilograms of cement. However, dosage can be increased to 2.00 - 2.50 liters per 100 kilograms of cement and W/C ratio can be reduced to around 0.32 if a very high early strength concrete is required
When BC Tec 505 P is added at a rate of 750 ml per 100 kg cement to a 75 mm slump concrete, it will produce flow able concrete with a slump of 170-200 mm.
The slump loss will be gradual up to 4 hours at a temperature of 40 C when BC Tec 505 TP is used in specified proportions.
Variation in slump loss and setting characteristics are a function of the amount of admixture used, cement characteristics and the mix design selected. An increase in concrete temperature will cause an increase in slump loss and decrease in initial set time.
In order to have better slump retention it is advised to have more than 200 mm of initial slump.
When designing mixes for use, BC Tec 505 TP ACI 211.1 and ACI 211.2 recommendation should be followed. After the initial mix is established the sand to coarse aggregate ratio may be adjusted to maintain homogeneity of the "flowing" concrete mix