



CLASSIC SUPERFLO PC 8860

Polycarboxylate ether polymer based Hyper Plasticizer

DESCRIPTION AND MECHANISM OF SUPERFLO PC 8860

CLASSIC SUPERFLOW PC 8860 is a high performance (high strength and durability) super plasticizer for concrete based on a polycarboxylate ether polymer.

CLASSIC SUPERFLO PC 8860 differs from **CLASSIC SUPERFLO PC 6650** with respect to molecular weight distribution and degree of polymerization of the carboxylate monomer. The main polymer chain has carboxyl groups for the adsorption on the surface of cement particles and long polyethylene oxide graft chains with slump loss controlling agent (SLCA) that keep the cement particles physically away from each other. This results in superior workability of concrete mixtures coupled with the ability to maintain the fluidity (slump retention) for at least 4 hours after mixing at higher than ambient temperatures (35°C or more). The SLCA enhances slump retention apart from its role of providing fluidity to the concrete mixture.

CLASSIC SUPERFLO PC 8860 comprises of particles in the size range of 0.25 to 0.35 micrometers (μm) and is synthesized through Nano-scale polymerization. It is a high range super plasticizer (water reduction up to 40% in control concrete) with superior cement dispersion ability to provide extremely high slump values, even to concrete mixtures made with water to cement ratio of less than 0.30.

BENEFITS AND ADVANTAGES

- **CLASSIC SUPERFLO PC 8860** is highly dosage efficient a much smaller dosage as compared to conventional super plasticizers is only sufficient.
- **CLASSIC SUPERFLO PC 8860** imparts high flowability to the mixture so as to fill the formwork under its own weight (self-compacting ability) without any voids or segregation of aggregates. This self-compacting concrete (SCC) maintains fluidity for longer periods (about 4 hours at 35°C because of the presence of SLCA). SLCA prevents slump losses by “parachute effect” of slow adsorption on ettringite crystals formed at the beginning of cement hydration.
- **CLASSIC SUPERFLO PC 8860** can be used as a pumpability enhancer combined with plasticizing effect which allows high range water reduction leading to phenomenal increase in compressive strength, impermeability and durability.
- **CLASSIC SUPERFLO PC 8860** is especially recommended for Ready Mix Concrete production because of its very high slump retention characteristic imparted by SLCA. For long distance transportation in a tropical climate or when traffic delays are expected in the transportation of concrete from plant to site, a concrete plasticized by **CLASSIC SUPERFLO PC 8860** can retain smooth pumpability with minimal set retardation. Ready mixed concretes of moderate to very high strengths can be produced using this super plasticizer. RMC units can also suitably modify **CLASSIC SUPERFLO PC 8860** by introducing modified lignosulfonate (MLS) or Naphthalene Formaldehyde Sulfonate (NFS) in suitable proportions to minimize the admixture cost without sacrificing on concrete quality as per the design specification. **PRIMADON** technical service department is available to assist in correct blending procedure. **CLASSIC SUPERFLO PC 8860** is compatible with MLS and NFS admixtures.
- **CLASSIC SUPERFLO PC 8860** imparts high self-compaction or self-leveling, reduces shrinkage and creep, increases flexural strength, reduces carbonation, improves adhesion to

re-inforcing and pre-stressing steel and develops early strength. It helps in producing a cohesive, smooth and fair faced concrete.

- Appearance : Amber Colored liquid.
- Specific Gravity : 1.15 ±0.01
- pH value : 7 ± 1
- Solid Content : 45%
- Chloride Content : Nil (BS: 5075)
- Solubility : Water Soluble.

STANDARDS

CLASSIC SUPERFLO PC 8860 conforms to ASTM C 494 Type B, Type D and Type G and complies with IS:9103-1999.

DOSAGE

Range : 400 ml to 1200 ml per 100 kg Cement.
(0.4% to 1.2% [V/W])

As with most commodity concrete additives, the efficiency obtained by the use of **CLASSIC SUPERFLO PC 8860** is dependent on dosage, water-to-cement ratio, the nature of constituent materials such as cement, fly ash and ground granulated blast furnace slag. The type of cement, its fineness and the C3A (tricalcium Aluminates) content are important parameters that influence the performance of the chemical admixture. It is therefore necessary to assess the performance of concrete in its conditions of placing to arrive at optimum dosage of **CLASSIC SUPERFLO PC 8860** to ensure desirable plastic and hardened concrete properties.

COMPATIBILITY WITH CEMENT

CLASSIC SUPERFLO PC 8860 can be used with all types of OPC, composite cement (PSC and PPC), Silica Fume, Metakaolin, Rice Husk Ash (RHA), Pulverized Fuel Ash (PFA) and Ground Granulated Blast Furnace Slag (GGBFS).

MATERIAL SAFETY DATA

CLASSIC SUPERFLO PC 8860 is made from chemicals which present no fire or health hazard. However, in case of spillage, washing with water is adequate. Eye/skin contact should be avoided.

STORAGE AND SHELF LIFE

To be stored away from heat and frost. Best before 12 months from the date of manufacture.

PACKING

50kg and 200kg HDPE drums. Small and bulk packing on request.



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