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CONFLOW-CP

Polycarboxylate based advance super plasticizers

DESCRIPTION:

CONFLOW-CP is an admixture of a new generation based on modified Polycarboxylic ether. The product has been primarily developed for application in high performance concrete where the highest durability and performance is required.

CONFLOW-CP is free of chloride and low alkali. It is compatible with all types of cements.

CHEMISTRY & MECHANISM OF ACTION:

What differentiates CONFLOW-CP from the traditional super plasticizers is a new, unique mechanism of action that greatly improves the effectiveness of cement dispersion. Traditional super plasticizers based on melamine and naphthalene Sulphonates are polymers which are absorbed by the cement granules. They wrap around the granules' surface areas at the very early stage of the concrete mixing process. The Sulphonic groups of the polymer chains increase the negative charge of the cement particle surface and disperse these particles by electrical repulsion. This electrostatic mechanism causes the cement paste to disperse and has the positive consequence of requiring less mixing water to obtain a given concrete workability.

CONFLOW-CP has a different chemical structure from the traditional super plasticizers. It consists of a carboxylic ether polymer with long side chains. At the beginning of the mixing process it initiates the same electrostatic dispersion mechanism as the traditional super plasticizers, but the side chains linked to the polymer backbone generates a steric hindrance which greatly stabilizes the cement particles' ability to separate and disperse. steric hindrance provides a physical barrier (alongside the electrostatic barrier) between the cement grains. With this process, flowable concrete with greatly reduced water content is obtained.

Nature Aqueous solution of a modified Polycarboxylate.

TYPICAL PROPERTIES:

PH	: (10% in distilled water) ca. 7
Viscosity	: At 73°F mPa·s ca. 100 (Brookfield RV, Spindle #4 at 100 rpm)
Density g/cm ³	: ca. 1.10 lbs/gal ca. 9.17
Sensitivity to frost	: -18°C/0°F >5 cycles
Molecular Weight	: ca. 30 (K value, 1.0% in distilled water)
Appearance	: clear or slightly cloudy, reddish liquid



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USES:

- High early and ultimate strength concrete
- High performance concrete for durability
- Production of Rheodynamic concrete
- High workability without segregation of bleeding
- Precast & Pre-stressed concrete
- Concrete containing Pozzolanic material such as Micro silica, GGBFS, PFA including high volume fly ash concrete

ADVANTAGES:

- Marked increase in early & ultimate strengths
- Higher E modulus
- Improved adhesion to reinforcing and stressing steel
- Better resistance to carbonation and other aggressive atmospheric conditions
- Lower permeability – increased durability
- Reduced shrinkage and creep
- Elimination of vibration and reduced labour cost in Placing

DOSAGE:

Optimum dosage of CONFLOW-CP should be determined with trial mixes. As a guide, a dosage range of 200ml to 500 ml per 50 Kg. bag of cement is normally recommended. Because of vibrations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local representative.

PACKAGING:

CONFLOW-CP is supplied in 20 Kg / 200 Kg drum Packing.

STORAGE AND SHELF LIFE:

CONFLOW-CP must be stored where temperatures do not drop below + 5 Degree C. Shelf life is 12 months when stored in cool Dry place.