

CONXL - PCE DM 5045

SLUMP RETAINING SUPERPLASTICIZER FOR READY MIX CONCRETE

DESCRIPTION

CONXL - PCE DM 5045 is the superplasticizer based on polycarboxylic ether polymers. It is a cost effective water reducing admixture, specially developed for low to high grade concrete (M15 to M50). It has high slump retaining capacity coupled with high strength gain characteristics.

USES:

CONXL - PCE DM 5045 is mainly for the following types of concrete.

- High performance concrete
- In site piling concrete
- Ready mix concrete
- Site batched concrete
- Pumping concrete

BENEFITS AND ADVANTAGES

- CONXL - PCE DM 5045 is highly dosage efficient - a much smaller dosage as compared to conventional superplasticizers.
- CONXL - PCE DM 5045 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 3 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.
- CONXL - PCE DM 5045 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.
- CONXL - PCE DM 5045 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 CONXL - PCE DM 5045 can retain smooth pumpability with minimal set retardation. Ready mixed concretes of moderate to very high strengths can be produced using this super plasticizer.

- CONXL - PCE DM 5045 imparts high self-compaction or self-leveling, reduces shrinkage and creep, increases flexural strength, reduces carbonation, improves adhesion to reinforcing and pre-stressing steel and develops early strength. It helps in producing a cohesive, smooth and fair faced concrete.

CHEMICAL PROPERTIES

Appearance	:	Light Brownish
Specific Gravity	:	1.06
pH	:	7±1
Chloride content	:	0.014 IS: 9103-1999 IS 6925-1973 (Reaffirmed 2013)
Solubility	:	Water Soluble

STANDARDS

CONXL - PCE DM 5045 conforms to ASTM C 494 Type B, Type D and Type G and complies with IS: 9103 - 1999.

DOSAGE

Range : 300 ml - 1500 ml per 100 kg cement.
(0.3% to 1.5% [v/w]) Optimum dosage to be fixed by laboratory and site trials.

As with most commodity concrete additives, the efficiency obtained by the use of CONXL - PCE DM 5045 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 aluminate) 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 CONXL - PCE DM 5045 to ensure desirable plastic and hardened concrete properties.

COMPATIBILITY WITH CEMENT

CONXL - PCE DM 5045 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

CONXL - PCE DM 5045 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

230kg HDPE drums. Small and Bulk packing on request.

DISCLAIMER

Information contained in this bulletin is true, accurate and represents our best knowledge and experience. No warranty is given or implied with any recommendations made by us or any of our representatives, as the conditions of use and the competence of any labour involved in the produce usage are beyond our control.

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