



Asian Laboratories

Construction Chemical Manufacturers



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PRODUCT INFORMATION: CEMWET SP – 3000 (PCE-1)

FOURTH GENERATION SLUMP RETAINING SUPER PLASTICIZER

DESCRIPTION :

CEMWET SP-3000 (PCE-I) is a new generation Super Plasticizer having high molecular weight. The product is polycarboxy-ether based product, which allows mixing water to be reduced considerably maintaining slump of concrete for long period of time as compared to Normal Naphthalene and Melamine polymer condensates. The product is high quality control and is provided with performance assurance certificate when ever required.

PRIMARY USES :

- (i) In concrete mixes, that are workable with less water for achieving high strength and high performance concrete.
- (ii) Suitable for high volume fly ash concrete.
- (iii) Improves performance of low water cement ratio concrete and its slump retention is increased to more than two hours.
- (iv) Suitable for OPC, PPC and Slag Cements.
- (v) Excellent performance in concrete mixes used for bridges, high rise buildings, Off shore and marine structures, pre-cast and pre-stressed structures, tunnels etc.

SPECIALITY:

CEMWET SP-3000 (PCE-I) disperses cement particles and can maintain slump of concrete for more than two hours without affecting early development of strength.

CEMWET SP-3000(PCE-I) satisfies ASTM C-494 Type-G and IS 9103-99 at normal Dosage. Due to high water reduction capacity all the properties of hardened concrete are improved significantly, namely permeability, shrinkage, creep, workability & modulus of elasticity

CEMWET SP 3000(PCE-I) is compatible with all types of cements such as OPC, PPC and Pozzolana, High Alumina Cement, Slag Cement

DOSAGES:

Recommended dosage is 0.3% to 2.5% by wt. of cement. However accurate dosage can be determined after laboratory trials for a particular concrete mix design.

PACKING:

250Kg drums. Bulk deliveries in tankers are available on request.

TYPICAL PROPERTIES :

Colour : Light Yellow

Specific Gravity : 1.15 ± 0.020

Chloride Content : NIL to BS 5075, to IS 456-2000

Air Entertainment : Maximum 1.5% of Control as per IS: 9103-99

Water Reduction : More than 30%

Flow Characteristics : Only a small amount of additive of Fresh Concrete is needed to improve the flow of concrete. At low water to cement ratio, the concrete is capable to flow and remains mobile normally one to two hours without adding any more water or additives.

Compressive Strength : By designing concrete mixes admixed with the admixture and water reduction upto 30% and cement content ranging from 180 to 450 Kg/m³, it has been possible to retain slump of concrete upto two hours and achieve high early and long term strength. However, the composition of cement, type and grading of sand, dosage of the admixture and the water reduction are the important factors that play part in designing the concrete mixes and should be considered for achieving plasticity, durability and high strength of the concrete.

EFFECTS OF OVER DOSAGE :

- (vi) Retardation of initial and final set
- (vii) Slight increase in air entrainment
- (viii) Increase in workability

SAFETY PRECAUTIONS :

CEMWET SP-3000 (PCE-I) contains no hazardous substances.

STORAGE :

CEMWET SP-3000 (PCE-I), in tightly closed original contains, has a shelf life of at least 2 years. The product must be stored in a place where temperatures do not drop below + 5°C. If the product has frozen, thaw and agitate until completely reconstituted.

TYPICAL EXAMPLE OF SOME CONCRETE MIXES :-

Grade of Concrete	M-20	M-25	M-30	M-35
Mix	—	—	—	—
Ambient Temp.	30.1°C	26.7°C	30.1°C	31.2°C
Concrete Temp.	35.2°C	30.2°C	33°C	32.8°C
Cement (Kg/m ³)	270	260	410	490
Fly Ash	82	90	—	—
Microsilica (Kg/m ³)	—	—	—	—
Sand Zone-II (Kg/m ³)	686	644	712	516
10mm Coarse Aggregate (Kg/m ³)	576	533	522	596
20mm Coarse Aggregate (Kg/m ³)	576	672	639	724
Density (Kg/m ³)	2510	2515	2528	2580
Admixture CEMWET SP-3000 (PCE-1)	1.0%	1.0%	0.8%	1.2%
Water L/m ³	170	168	170	161.3
Water/Cement + Fly Ash Ratio	0.48	0.48	0.41	0.33
Slump in : mm : -0 min. 30 min. 60 min. 90 min. 120 min.	Collapse Collapse 170mm 150mm 130mm	Collapse Collapse 170mm 180mm 130mm	180mm 165mm 150mm 130mm 100mm	180mm 170mm 150mm 130mm 105mm
Compressive Strength (Kg/cm ²) at 24 C	—	—	—	—
3 days :	200.16	179.16	329.86	430.54
7 days :	231.86	243.96	371.62	489.21
28 days :	291.10	343.18	451.68	602.16
Target mean strength (Kg/cm ²) (As per IS 456-2000)	266	316	433	583

N.B. : This information is given in good faith, its based on results gained from experiences and tests. However, all recommendation or suggestion are made without guarantee since the conditions of use are beyond our control.

PRICE, PERIOD OF DELIVERY AND TERMS OF BUSINESS ON REQUEST
MANUFACTURED BY

