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# Asian Laboratories

87-88, NEW OKHLA INDUSTRIAL COMPLEX, SCHEME-I, D.S.I.D.C. SHED, PHASE II, NEW DELHI-110020

## CEMWET SP - 3000 (SR)



### SLUMP RETAINING SUPER PLASTICIZER FOR SELF-COMPACTING PLASTIC CONCRETE

IS:9103-99



CM/L - 2339958

#### DESCRIPTION :

CEMWET SP-3000 (SR) is a Fourth Generation Super Plasticizer having high molecular weight. The product is sulphonated polymer made by modifying Naphthalene Formaldehyde condensate which allows mixing water to be reduced considerably maintaining slump of concrete for longer period of time as compared to normal Naphthalene and Melamine polymer condensates. **CEMWET SP - 3000 (SR)** is a chloride-free product having prestigious mark of IS 9103-99. The admixture produces self-compacting or self-leveling concrete with high slump retention. The product is high quality admixture produced by maintaining stable quality control and is provided with performance assurance certificate whenever required.

#### PRIMARY USES :

- In concrete mixes, that are workable with less water for achieving high strength and high performance concrete.
- For production of plastic and self-compacting concrete.
- Suitable for Ready-Mixed Concrete and pre-cast concrete mixes.
- Improves performance of Low water cement ratio concrete and its Slump retention is increased to more than two hours.
- Suitable for high C3A and high fineness OPC cement.
- Suitable for Slag Cement having very high fineness.
- Excellent performance in concrete mixes used for bridges, high rise buildings, Off-shore and marine structures, pe-cast and prestressed structures, tunnels etc.

#### SPECIALITY

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

- **CEMWET SP-3000 (SR)** satisfies ASTM C-494 Type-G at normal Dosage. Due to high water reduction capacity of more than 35% all the properties of hardened concrete are improved significantly, namely, shrinkage, creep, workability & modulus of elasticity.

CEMWET SP 3000 (SR) is compatible with all types of cements.

- OPC especially high C3A (>8) and high fineness cement (>2700 cm<sup>2</sup>/gm) viz - OPC-43 and 53 Grade Cement etc.
- OPC Low C3A cement, Sulphate Resistant Cement, Pozzolana cement.
- High Alumina Cement Concrete
- Slag Cement

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.

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

<b>Colour</b>	: Brown Free Flowing Liquid
<b>Specific Gravity</b>	: 1.22 ± 0.020
<b>Chloride Content</b>	: NIL to BS 5075 to IS 456-2000
<b>Flow Characteristics Of Fresh Concrete</b>	: Only a small amount of additive 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.
<b>Air Entrainment</b>	: Max. 1.5% of control as per I.S. : 9103-99
<b>Water Reduction</b>	: More then 35%

## COMPRESSIVE STRENGTH :

By designing concrete mixes admixed with the admixture and water reduction upto 35% and cement content ranging from 270 to 450 Kg/m<sup>3</sup>, 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.

Typical examples of some concrete mixes are given below :-

### TYPICAL EXAMPLE OF CEMWET SP 3000 SR FOR LONG RETENTION OF SLUMP

Grade of Concrete	M-20	M-25	M-30	M-35	M-45	M-50
Mix	86	77	95	92	132	126
Ambient Temp	27°C	27°C	27°C	27°C	27°C	27°C
Concrete Temp.	25°C	25°C	25°C	25°C	25°C	25°C
Cement OPC-43 Ord (Kg/m <sup>3</sup> )	280	380 (Vik.-43)	325 (Shri-43)	400	430 (Vik-43)	440 (53 Gr.)
Fly Ash	45	-	50	-	-	-
River Sand (Kg/m <sup>3</sup> )	620	667.18	687.4 (Stone Dust)	672	646	709.37
10mm Coarse Aggregate 5 - 15mm (Kg/m <sup>2</sup> )	570	474.45	477.8	405	416	366.14
20mm Coarse Aggregate (Kg/m <sup>2</sup> )	650	711.67	643.7	755	772	743.38
Density Kg/m <sup>3</sup> )	2393	2545	2459	2524	-	-
Admixture CEMWET SP-3000 (SR)	0.8%	0.7%	1.0%	1.8%	1.0%	1.2%
Water L/m <sup>3</sup>	185	152	163.125	147	150.5	140.8
Water/C + FA	0.57	0.4	0.435	0.36	0.35	0.32
Slump in - mm : 0 min 30 min 60 min 90 min 120 min	Collapse Collapse Collapse 190 175	170 150 120 110 -	155 145 130 115 95	145 135 130 120 115	140 130 110 100 -	130 125 100 90 -
Air Content — 0 min. Final	2.5 3.5	2.6 3.2	3.0 3.5	2.8 3.6	2.5 3.5	2.8 3.25
Compressive Strength (Kg/cm <sup>2</sup> ) at 24°C						
1 day :	60	145	120	150	160	175
3 days :	156	368.45	210	306	430	450
7 days :	175	392.47	281.45	437	599	628
28 days :	281	441.57	382.63	495	697	653
Target mean strength (Kg/cm <sup>2</sup> ) (As per IS 456 - 2000)	267	316	383	433	535	583

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

MANUFACTURED BY

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