HIPPO CHEM

Concrete Hyperplasticizer

HP300

Concrete Hyperplasticizer is a liquid admixture based on polycarboxylate ether. It is a very strong water reducer and a very strong, high-performance workability enhancer for concrete, and it markedly improves the distribution of cement particles in the concrete. This product is particularly recommended for special concretes (self-compacting and self-leveling concrete), for concretes whose code requirements call for minimizing the water-to-cement ratio, and in special conditions where slump loss cannot be compensated by other plasticizing materials. Owing to the considerable reduction in the water-to-cement ratio, the carboxylate hyperplasticizer increases mechanical strength and reduces the permeability of concrete to aggressive chemical agents, and thereby increases the durability of concrete. Using this product also reduces the water-to-cement ratio by up to 35 percent.

Applications: Pumped concrete; casting of beams, slabs, bridge decks, columns and shear walls; concrete production in hot regions; creating and maintaining workability in ready-mixed concrete; providing cohesion in concrete mixes with coarse-graded aggregate.

Method of use: The concrete hyperplasticizer can be added at the batching plant during concrete production, or to the truck mixer at the project site. It can also be added to ready-mixed concrete; placement should begin only after thorough mixing is confirmed. It is recommended to mix the plasticizer in the truck mixer for at least 1 minute per cubic meter of concrete. Do not pour the plasticizing admixture directly onto dry cement.

Dosage: The exact dosage of the concrete hyperplasticizer admixture is determined based on proper site trials, the weather conditions and the type of materials used. The optimum dosage range for this product is 0.25 to 1.0 percent of the weight of cement and cement-replacement materials. Exceeding the usual dosage is not permitted.

Property	Result	Test	Value per Iranian National Standard INSO 2930-2	Company Test Results
Physical state	Liquid	**Water reduction (equal workability)**	At least 12 percent less than the control mix	35 percent
Color	Honey brown to light	**Compressive strength (equal workability)**	1-day: greater than 140% and 28-day: greater than 115% of the control mix strength	1 day: 200 percent 28 days: 150 percent
Density	1.07 ± 0.02 g/cm³	**Increase in workability (equal water-to-cement ratio)**	Increase of 120 mm relative to the initial slump	170 mm
Solubility	Soluble in water	**Compressive strength (equal water-to-cement ratio)**	At least 90% of the 28-day control strength	135 percent
pH	4–6	**Fresh concrete air content (both cases)**	Maximum 2% by volume more than the control mix	1.4 percent
Chloride ions	None			

Packaging	20 kg jerrycan
Shelf life	One year in original packaging
Storage conditions	Protect from cold and frost, heat, and direct or prolonged sunlight
Recommended storage temperature	+10 to +30 °C

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