

HYDROPLAST - 500

Slump Extending and Workability Enhancing (PCE) Super-plasticizer

Product Description:

HYDROPLAST-500 is a 4th generation high performing polycarboxylate ether super plasticizer with enhanced workability, impressive water reducing, extended slump retention and anti bleeding and segregation properties. It is particularly suitable for ready mix industry where concrete is transported for long distances and slump retention is important.

HYDROPLAST-500 allows for the production of high quality concrete with low water - cement ratio, ensures a controlled extended workability and improves early strength development. **HYDROPLAST-500** is suitable for HOT and COLD climate, minimizes bleeding and segregation tendencies.

Working Principle:

HYDROPLAST-500 improves the cement dispersion within the concrete significantly. This property allows for the formation of a homogeneous and low viscosity cement paste which ensures an improved workability, extended workability and slump retention.

Primary Uses:

HYDROPLAST-500 is typically used to produce:

-) Ready mix concrete
-) Precast concrete
-) Use in concrete where delayed setting and extended workability are desired.
-) Mass-concrete pours.
-) Self compacting concrete.
-) Long distance transportation of concrete.
-) Pumped concrete.
-) Hot weather concreting.
-) All concrete works where good workability, slump retention and increased waterproofing properties are required. Such as: swimming pools, sea Ports, tunnels, bridges, basement, etc.

Benefits

-) Better customer satisfaction is achieved because the concrete producer can consistently produce and deliver quality concrete
-) Provides good slump and workability retention without retardation
-) Reduces the need for job site adjustment of slump and workability
-) Desired Strength can be achieved by reducing cement contents to meet specified Strength without loss of workability
-) Improves the quality of concrete by increasing workability, while reducing the water Cement ratio & pumping properties
- Improved physical & mechanical properties.
- Improved surface finish.
- Improved cohesion minimizes risks of segregation, bleeding and creep.
- Denser concrete improves waterproofing properties and protection of reinforcement steel against detrimental water-borne ion attack.
- Water-based, non-flammable, non-toxic.
- Chloride-free; suitable for pre-stressing.
- Specially formulated for hot weather concreting.
- Increased compressive and flexural strength

Standards:

HYDROPLAST-500 is formulated to comply with all the requirements of:

- ASTM C- 494,
 - Type AEN 943, Part 2, Tables 1 and 2
- HYDROPLAST 500 is compatible with all types of Portland cement

Technical Properties:

Appearance:	Light Blue liquid or Colorless
Specific Gravity:	1.175 ± 0.005 at 20° C
Chloride content:	Nil
Additional	
Air-entrainment:	Less than 1 %
Water-reduction:	20-35 % of mixing water
Permeability	Reduces concrete porosity, improves waterproofing and durability.
Compressive strength:	Increased early and ultimate compressive strengths
Cohesion:	Improved cohesion reduces risk of segregation
Compatibility:	Compatible with all types of Portland cement including Sulfate Resisting Cement (SRC).Compatible with other ARMORSIL admixtures when dispensed separately

Dosage Range:

Dosage is influenced by cement type, mix design; quality of used materials, ambient temperatures and other specific requirements, so site trials should be carried to determine the optimum dosage.

Dosage: typically 0.5% to 2.5% by the weight of total cementitious content (cement + replacers if used). 500ml-2500ml to 100kg cement. See further guidance on dosaging below.

Dosage Guidance Table

Required workability time and SCC impact	Product	Recommended Dosage
60 min	Hydroplast-500	0.5%
120 min	Hydroplast-500	1.0 %
240 min	Hydroplast-500	1.5 %
360 min	Hydroplast-500	2.5 %

Dispensing:

HYDROPLAST-500 May be added with the initial mix water or should be added with the last third of mixing water. However optimum water reduction is achieved with delayed addition. Do not add directly to the dry mix or cement. For proper administration an automatic dispenser could be used.

Overdosing:

An overdose of HYDROPLAST-500 may result depending on dosage in an increase of workability and extension of setting time. Overdosed concrete must be protected against direct sun light and water evaporation to allow proper curing.

Do not use HYDROPLAST 500 with other type of admixture containing Naphthalene Sulfonate Blends. The performance of the admixture will be adversely affected.

Limited Warranty

All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty either expressed or implied. User shall rely on his or her own information and tests to determine suitability of the product for the intended use and user assumes all risk and liability resulting from his or her use of the product. Nothing contained in any supplied materials relieves the user of the obligation to read and follow the warnings and instruction for each product as set forth in the current Technical Data Sheet, product label and Safety Data Sheet prior to product use away.

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