

NPC - 523

High Early Strength Super Plasticiser (PCE Accelerator)

DESCRIPTION

NPC - 523 is the superplasticizer based on second generation polycarboxylic ether polymers, developed using advance technology. This product has been developed for applications which requires highly water reducer concrete to facilitate high early strength gains with denser concrete. ADMIX PRO523 is free of chloride & low alkali. It is compatible with all types of cements.

APPLICATION

- NPC - 523 is used for the production of high early strength ready-mix concrete.
- It can be used for concrete containing pozzolans such as micro silica, GGBFS, PFA including high volume fly ash concrete.

FEATURES AND BENEFITS

- Marked increase in early & ultimate strengths
- Marked increase concrete density.
- Improved adhesion to reinforcing and stressing steel
- Better resistance to carbonation and other aggressive atmospheric conditions
- Lower permeability - increased durability
- Reduced shrinkage and creep

TECHNICAL INFORMATION

Aspect	Light brown liquid
Relative Density	1.07 ± 0.02 at 25°C
pH	≥ 6
Chloride ion content	< 0.2%

Concrete Grade M-50		Slump Observation	Without Admixture	With Admixture
Cement	422	Initial	140	Collapse
20 mm Aggregate	706	30 minutes	60	140
10 mm Aggregate	578	60 minutes	-	110
Sand	621	90 minutes	-	-
Water	148	120 minutes	-	-
Admixture (0.7%)	2.95	150 minutes	-	-

Compressive Strength	Without Admixture	With Admixture
3 DaAM	25.79	37.40
7 DaAM	39.65	48.40
28 DaAM	52.50	65.30

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TEST CERTIFICATION/APPROVALS

- ASTM C494 Types G
- EN 934-2 T11.1/11.2
- IS 9103

DOSAGE

Optimum dosage of NPC - 523 should be determined with trial mixes. As a guide, a dosage range of 0.5 to 1.2 % by the weight of cementitious material is normally recommended. Because of variations in concrete materials, concrete design, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local NEOSEAL representative. For additional information on NPC - 523 admixture or on its use in developing concrete mixes with special performance characteristics, contact your local NEOSEAL representative.

APPLICATION

NPC - 523 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of NPC - 523 to dry aggregate or cement is not recommended. Automatic dispensers are available. Thorough mixing is essential and a minimum mixing cycle, after the addition of the NPC - 523, of 2-3 Min for forced action mixers is recommended.

CORROSIVITY

NON-CORROSIVE NPC - 523 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of NPC - 523 admixture. In all concrete application, NPC - 523 admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

WORKABILITY

NPC - 523 ensures that rheoplastic concrete remains workable in excess of 60 minutes at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability. It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

PACKAGING

NPC - 523 is supplied in 220 kg drums or in bulk up on request.

SHELF LIFE AND STORAGE

NPC - 523 must be stored between 5°C to 45°C. If product frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months when stored as above. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local NEOSEAL representative.

PRECAUTIONS

Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment during mixing and application. In case of contact with skin, rinse with plenty of clean water and then cleanse with soap water. If accidentally ingested, seek immediate medical attention. Keep away from children

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and animals. Re-seal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on NEOSEAL Adhesive web site

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