

TECHNICAL DATASHEET

NPC - 521 (MID PC)

Concrete Admix

(Retarding super plasticiser based on PCE)

DESCRIPTION

NPC - 521 (MID PC) is an economical admixture based on modified polycarboxylic ether. The product has been primarily developed for applications in ready mix concrete as well as site-batched concrete. NPC - 521 (MID PC) is specially designed to allow considerable reduction of water cement ratio while maintaining control on extend of set retardation. NPC - 521 (MID PC) is free of chloride & low alkali. It is compatible with all types of cements.

APPLICATION

- Ready mixed concrete
- Long-distance transporting
- Pumped concrete
- High workability without segregation or bleeding
- High performance concrete for durability
- Congested/complex reinforced sections

FEATURES AND BENEFITS

- Good dispersion even in mixes with high fines
- High workability for longer periods
- Lower pumping pressure
- Resistance to segregation even at high workability
- Extended setting with longer workability
- Reduced water content for a given workability
- Higher ultimate strengths
- Increased ease in finishing concrete

TECHNICAL INFORMATION

Aspect Relative	Light brown liquid
Density	1.05 ± 0.02 at 25°C
pH	≥6
Chloride ion content	< 0.2%

NeoSeal Adhesive Pvt. Ltd.

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Concrete Grade M-20		Slump Observation	Without Admixture	With Admixture
Cement	300	Initial	50	Collaps
20 mm Aggregate	744	30 minutes	-	Collaps
10 mm Aggregate	422	60 minutes	-	180
Sand	844	90 minutes	-	160
Water	165	120 minutes	-	130
Admixture (0.7%)	2.1	150 minutes	-	-

Compressive Strength	Without Admixture	With Admixture
3 DaAM	9.8	10.78
7 DaAM	14.25	17.1
28 DaAM	22.4	29.12

TEST CERTIFICATION/APPROVALS

- ASTM C494 Types A, D & G
- EN 934-2 T3.1/3.2
- IS 9103

DOSAGE

Optimum dosage of NPC - 521 (MID PC) should be determined with trial mixes. As a guide, a dosage range of 0.4 to 1.1 % by the weight of cement is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local NEOSEAL representative. For addition information on NPC - 521 (MID PC) admixture or on its use in developing concrete mixes with special performance characteristics, contact your local NEOSEAL representative.

Effects of over dosage:

A severe over-dosage of NPC - 521 (MID PC) can result in the following:

- Reduced permeability
- Long extension of initial and final set
- Increase in air entrainment
- Bleed/segregation of mix, quick loss of workability
- Increased plastic shrinkage

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A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored. In the event of over dosage, consult your local NEOSEAL representative immediately.

APPLICATION

NPC - 521 (MID PC) 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 - 521 (MID PC) 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 - 521 (MID PC), of 2-3 Min for forced action mixers is recommended.

CORROSIVITY

NON-CORROSIVE NPC - 521 (MID PC) admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof SAMtems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of NPC - 521 (MID PC) admixture. In all concrete application, NPC - 521 (MID PC) admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

WORKABILITY NEOPLAST

CAM-521 ensures that rheoplastic concrete remains workable in excess of 150 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 - 521 (MID PC) is supplied in 220 kg drums or in bulk up on request.

SHELF LIFE AND STORAGE

NPC - 521 (MID PC) 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 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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