

ADMIX PN220

Superplasticizer and High Range Water Reducing Concrete Admixture based on Polynaphthalene Sulfonate

The basic components of **ADMIX PN220** are synthetic polymers which allow mixing water to be reduced considerably and concrete strength to be enhanced significantly, particularly at early ages. This product contains no chloride and meets the requirements of ASTM C-494 Type A&F and Iranian National Standard 2930, as well as other international standards.

This product is compatible with all types of cements but due to variety of cement and aggregate's properties, site tests are always recommended in each project.

Performance of ADMIX PN220 in concrete

This product increases negative charge of cement particles which causes better dispersion of cement and producing free flow concrete even at low water cement ratios.

Concrete with **ADMIX PN220** shows strengths higher than concrete without admixture having the same workability. Initial and final sets do not change significantly with respect to concrete without admixture. Therefore, whenever longer transport and finishing times are needed, the use of retarding superplasticizers, such as **ADMIX PR230** or **ADMIX PS240** is recommended.

Applications

The excellent dispersion property of **ADMIX PN220** makes it ideal admixture for production of high performance and precast concrete. It is also used in complicated formwork or with congested reinforcement when low water cement ratios are required. High workability allows the production of high early strength concrete with minimal voids and therefore optimum density.

Effect on hardened concretes

Besides stated effects of this admixture on fresh concrete while mixing and casting, it also has significant positive effects on hardened concrete such as: increasing early and ultimate compressive and flexural strengths, higher E-modulus, improving adhesion to reinforcing and stressing steel, better resistance to carbonation, lower permeability, better resistance to aggressive atmospheric conditions, reducing shrinkage and creep and increasing durability.



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Properties

Appearance	Free flow liquid
Color	Dark brown
Density	1.17 - 1.18 g/cm ³ at 20°C
pH	7 - 8
Chloride content	< 0.1% w/w

Compatibility

This product should not be premixed with any other admixtures unless be approved by White Damavand specialists. In case of requirement of utilizing other admixtures in concrete, it is highly recommended to add them separately. ADMIX PN220 is compatible with concretes containing silica fume, fly ash, ground granulated blast or slag cement.

Mixing

ADMIX PN220 is a ready to use admixture and should be added to concrete at the time of batching. The best effect would be achieved if the admixture be added to concrete mix after adding 70 to 80 percent of water content. Never add **ADMIX PN220** to dry cement or aggregate. Full mixing is necessary to achieve maximum benefit, so mix the concrete for 60 seconds in high-speed mixer. Probable bleeding phenomenon in concrete is due to weak portion of aggregates and can be improved by adding fillers

Dosages

Recommended dosage of **ADMIX PN220** is 0.5 to 1.2 percent of cement (cementitious materials) content. Dosages outside this range are permissible subject to trial mixes.

Packaging

ADMIX PN220 is supplied in 220 kg drums and 1100 kg IBCs. Bulk delivery is possible based on request.

Storage

This product must be stored in original containers at above +5 °C under cover, out of direct



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sunlight and protect from extremes of temperature. If frozen, gradually thaw and agitate until completely reconstituted.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage condition contact **White Damavand** Technical Services Department.

Safety awareness

ADMIX PN220 does not contain any hazardous substances. For more information about safety, please read product material safety data sheet.

Quality approval

All materials produced in **White Damavand** are under strict control of QC department and meet the requirements of international standards.

Supplementary data

For additional information, please contact company's specialists.



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