

SUPER-PLASTICIZER FOR CONCRETE AND MORTAR

Description

NIROPLAST 600G is Sulphonated Napthalene Polymers based super-plasticizer and supplied as a brown liquid, instantly dispersible in water.

It allows considerable reduction of mixing water while maintaining control on extend of set retardation thus improve the compressive strength of concrete and mortar without increasing the cement content.

It makes concrete more impermeable and durable.

NIROPLAST 600G is chloride free.

Uses

- ✓ Ready mixed concrete
- ✓ Long-distance transporting
- ✓ Pumped concrete
- ✓ Concrete containing Slag/ Pozzolans
- ✓ Mass concrete pours
- ✓ Hot weather concreting

Advantages

- ✓ Reduced thermal peaks
- ✓ 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
- ✓ Reduced permeability and improved durability
- ✓ Increased ease in finishing concrete
- ✓ Provides lower in-place cost

Reaction Mechanisms

NIROPLAST 600G is a Sulphonated Napthalene Polymers based super-plasticizer with high molecular weight, which greatly stabilizes the cement particles' ability to separate and disperse by electrostatic dispersion mechanism. It considerably reduces the water demand in flowable concrete and improves the workability retention.

Characteristics

Form	: Liquid
Colour	: Dark Brownish
Relative Density	: 1.18 ± 0.02 at 25°C
pH	: >6
Chloride ion content	: Nil (As per BS 5075 Part I)
Air entrainment	: Negligible

Standard Compliance

NIROPLAST 600G complies with BS:5075 and ASTM-C-494 Type 'A & G' depending on dosage.

Dosage

Optimum dosage of NIROPLAST 600G should be determined by site trials only using the materials and conditions that will be experienced in use.

However, as a guide, a dosage range of 0.4 to 2% on cementitious material is recommended.

Dosages outside of the recommended range may be required. In such cases, contact our local representative.

Effects of under and overdosing

Under dosages may cause lack of workability and over dosage may cause extension of setting time and increase in air entrainment.

Direction for use

NIROPLAST 600G is a ready-to-use liquid admixture.

For maximum dispersion throughout the mix, measured quantity of NIROPLAST 600G should be added into the mixer at the same time as the mixing water. The plasticizing effect and water reduction will be higher when the admixture will be added to the damp concrete by adding 60 to 80% of the mixing water in it.

The addition of NIROPLAST 600G to dry aggregate or cement is not recommended.

To impart higher workability to concrete at site using ready mix trucks, it can be added to the concrete via the feed hopper at the rear of the truck. Mix before discharge for 5 minutes at 10 rpm to produce a fully homogenous mix.

Compatibility

NIROPLAST 600G can be used with all types of cements except high alumina cement. It is compatible with Sulphonated Napthalene Polymers and ligno-sulphonates based plasticiser and retarders and also with most type of air entrainers, accelerators, viscosity modifying agent, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers. Site trials should be carried out to optimize dosages.

Durability

Reduction in W/C ratio enables increase in density and impermeability thus enhancing durability of concrete

Corrosion

It neither initiates nor promotes corrosion as it does not contain any harmful chemicals. Rather it reduces the risk of corrosion of reinforcement or other embedment, as it has water reduction power to produce a dense impermeable concrete.

Technical support

NIRMAN CHEMICALS provides technical advisory services for on-site assistance and guidance on mix design, optimum dosage evaluation of trials.

Packaging

NIROPLAST 600G is supplied in 20 kg, 225 kg drums or in bulk on request.

Storage and Shelf life

NIROPLAST 600G must be stored where temperatures do not drop below +5°C. If product has 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 our local NIRMAN CHEMICALS representative

Safety precautions

NIROPLAST 600G does not fall into the hazard classifications. However, it should not be swallowed or allowed to come into contact with the skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with the eyes it shall be rinsed immediately with plenty of water and medical advice sought immediately. If swallowed, medical attention shall be sought immediately - Vomiting should not be induced.

Fire

NIROPLAST 600G is water based and non-flammable.

Cleaning of Tools

Clean all tools and application equipment with water immediately

Note

All Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact our local NIRMAN CHEMICALS representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labor involved in the application are beyond our control.



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