

HIGH PERFORMANCE RETARDING PLASTICIZER FOR CONCRETE AND MORTAR

Description

NIROSET RP is a high performance retarding plasticizer based on selected hydroxycarboxylic materials, beneficial in maintaining workability especially in high ambient temperatures. It is supplied as a colourless to brownish solution which instantly disperses in water. NIROSET RP disperses in the concrete mix, enabling the water content of the concrete to perform more effectively. The initial hydration of the cement is also delayed, resulting in high workability retention of the concrete with no adverse effect on strength gain.

Uses

- ✓ Ready-mix concrete where high workability retention and retardation are of prime importance.
- ✓ Hot weather concreting
- ✓ Reduction in permeability, reducing effect of groundwater salts on concrete and steel.
- ✓ Mass concrete pours to control the heat of hydration
- ✓ Particularly suitable for use in mixes having fly ash and also improve the working life of semidry concrete mixes, specifically RCC (Roller Compacted Concrete) type of mixes.

Advantages

- ✓ Water reduction significantly improves compressive strengths at all ages and enhances durability through the production of low permeability concrete
- ✓ Controlled retardation extends working life and stiffening time for ease of construction
- ✓ Control of stiffening improves slip forming and assists in preventing the formation of cold joints in large pours
- ✓ Allows specified strength grades to be met at reduced cement content or increased workability
- ✓ Chloride free, safe for use in prestressed and reinforced Concrete

Standard Compliance

NIROSET RP complies with BS 5075 Part 1 and with ASTM C494 as Type B and Type D.

Characteristics

Form	: Liquid
Colour	: Colourless to Brownish
Relative Density	: 1.03 ± 0.02 at 25°C
pH	: >6
Chloride ion content	: Nil (As per BS 5075 Part I)
Air entrainment	: Negligible

Dosage

Optimum dosage of NIROSET RP 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 0.5 to 5% on cementitious material is recommended.

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

Effects of overdosing

Over dosage may cause, long extension of initial and final set. Bleed/segregation of mix.

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. The retarding effects of very high dosages will be exaggerated with Sulphate resistant cement.

In the event of over dosage, consult our local representative immediately.

Direction for use

NIROSET RP is a ready-to-use liquid admixture. For maximum dispersion throughout the mix, measured quantity of NIROSET RP 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 NIROSET RP to dry aggregate or cement is not recommended.

Compatibility

NIROSET RP can be used with all types of cements except high alumina cement. NIROSET RP is also compatible with slag and pozzolans such as fly ash and silica fume. It is compatible with PC based superplasticizers, Sulphonated Napthalene based superplasticizers and lingo-sulphonates based plasticizers. Site trials should be carried out to optimize the 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 content any harmful chemicals. Rather it reduces the risk of corrosion of reinforcement or other embedment, as it has water reduction power to produce a denser, 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

NIROSET RP is supplied in 20 kg, 225 kg drums or in bulk on request.

Fire

NIROSET RP is water based and non-flammable.

Cleaning of Tools

Clean all tools and application equipment with water immediately

Storage and Shelf life

NIROSET RP 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

NIROSET RP 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.

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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