

NON-CHLORIDE HARDENING ACCELERATOR FOR CONCRETE AND MORTAR

Description

NIROSET NCA is ready to use non-Chloride liquid accelerating admixture for use in concrete, mortar and portland cement. NIROSET NCA reduces the setting times in general and specially under cold weather, leading to early high and ultimate increased strengths. In addition, it reduces bleed and segregation while improves workability.

NIROSET NCA does not contain any added chloride ions ensuring that the product does not contribute to the corrosion of reinforcing steel. Rather it helps in reduction of chloride attack on concrete.

Uses

To accelerate the setting and early strength gain of Portland cement concrete and mortar mixes without the introduction of chloride. Acts as a plasticiser, so gives significant increases in both ultimate and early strengths.

Typical applications include:

- ✓ Precast/ Prestressed concrete production
- ✓ Concrete pavement repairs
- ✓ Repairs of the industrial floors
- ✓ Repairs of concrete slabs and flat members
- ✓ Cold weather concreting
- ✓ Early de-stripping in cold weather

Advantages

- ✓ Reduced segregation
- ✓ Chloride free, safe in prestressed and reinforced concrete
- ✓ Produces exceptionally high early strengths
- Early setting, without affecting the workability
- ✓ Early setting improves frost resistance
- ✓ Suitable for bricklaying mortar mixes
- ✓ Particularly effective in concrete at low temperatures

Characteristics

Form	: Liquid
Colour	: Colourless to light straw
Relative Density	: 1.25 ± 0.02 at 25°C
Freezing point	: -16°C
pH	: Min. 6
Chloride ion content	: Nil (As per BS 5075 Part I)

Standard Compliance

NIROSET NCA complies with BS 5075 Part 1 and with ASTM C494 as Type C.

Dosage

Optimum dosage of NIROSET NCA 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 1 to 4% on cementitious material is recommended.

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

Effects of overdosing

Result in increase in initial acceleration, but will not materially alter the ultimate strength or characteristics of the cured concrete or mortar.

Direction for use

NIROSET NCA is a ready-to-use liquid admixture.

For maximum dispersion throughout the mix, measured quantity of NIROSET NCA 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 NCA to dry aggregate or cement is not recommended

Technical support

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

Compatibility

NIROSET NCA can be used with all types of cements except high alumina cement. NIROSET NCA 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, ligno-sulphonates based plasticizers, air entrainers, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

The effect of NIROSET NCA is dependent upon the cement properties and the type of plasticizers used in

the concrete mix. The setting time and early strength gain may be affected if strong retarders are used in the mix.

Durability

It reduces the chance of corrosion 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 inbuilt chemical having corrosion protection property.

Packaging

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

Storage and Shelf life

NIROSET NCA 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 NIRMAL CHEMICALS representative.

Safety precautions

NIROSET NCA 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

NIROSET NCA 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 NIRMAL 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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