CONSET NCA

TECHNICAL DATA SHEET

NON-CHLORIDE HARDENING ACCELERATOR FOR CONCRETE AND MORTAR

Description

CONSET NCA is ready to use Non-Chloride liquid accelerating admixture for use in both the reinforced and unreinforced concrete, mortar and portland cement. CONSET NCA reduces the hardening times in general and specially under cold weather, leading to high early and ultimate strengths. In addition, it reduces bleed and segregation while improves workability.
CONSET 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 hardening time 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

Standard Compliances

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

Characteristics

Form	: Liquid
Colour	: Colourless to light straw
Relative Density	: 1.33 ± 0.02 at 25^{0}C
Freezing point	: -16^{0}C
pH	: Min. 6
Chloride ion content	: Nil (As per BS 5075 Part I)

Doses

Optimum dosage of CONSET 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

Effect 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

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

Compatibility

CONSET NCA can be used with all types of cements except high alumina cement. CONSET 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 entertainers, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.
The effect of CONSET 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 content any harmful chemicals. Rather it reduces the risk of corrosion of reinforcement or other embedment, as inbuilt chemical having corrosion protection property.

Rate of Hardening

The temperature of the concrete mix and the ambient temperature (forms, earth, reinforcement, air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing. One of the functions of CONSET NCA admixture is to accelerate the set of concrete. Within the normal dosage range, it will generally reduce the setting times of concrete containing normal portland cement approximately by 1 hour to 3 hours compared to a plain concrete mix, depending on materials at site and temperatures.

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Trial mixes should be made with site materials & approximating the job site conditions to determine the dosage required.
It is strongly recommended that concrete should be properly cured particularly in windy and dry climates.

Technical Support

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

Packaging

CONSET NCA is supplied in 20 kg, 250 kg drums or in bulk on request.

Fire

CONSET NCA is water based and non-flammable.

Cleaning of Tools

Clean all tools and application equipment with water immediately

Storage & Shelf life

CONSET 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 FCSC representative

Safety Precautions

CONSET 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.

Note

All Technical Data Sheets of FIRST CHOICE SPECIALITY CHEMICALS 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 representative.

Disclaimer

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