

NOVATECH CN

Calcium Nitrite based Corrosion Inhibiting Admixture

Description

Novatech CN is a concrete penetrating corrosion inhibiting admixture based on calcium nitrite designed to inhibit the corrosion of steel in reinforced concrete. **Novatech CN** contains a minimum of 30% calcium nitrite by mass.

Uses

- ✓ Recommended for all types of steel reinforced concrete that will be exposed to chloride environments or deicing salts.
- ✓ To provide protection against corrosion in reinforced concrete.

Advantages

- ✓ Calcium Nitrite acts as a corrosion inhibitor in reinforced concrete
- ✓ Compatible with other admixtures
- ✓ Will not affect workability or strength of concrete
- ✓ Shall be suitable for protection of reinforcement against chloride attack of marine atmosphere
- ✓ Extends working life of reinforced concrete structures

Action Mechanism

As an anodic type of steel bar corrosion inhibitor, nitrite forms a dense passivation film by oxidizing the iron atoms on the surface of the steel bar, inhibiting the anodic reaction of the steel bar surface.

Standard Compliance

Novatech CN conforms to IS 9103:1999 (RA 2018), IS 2645:2003 and ASTM C494, Type C.

Typical Properties

Appearance	Brownish liquid
Calcium nitrite content	Minimum 30%
Chloride content	Nil to BS 5075

Instructions for use

Compatibility

Novatech CN is compatible with other CCI admixtures in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The performance of concrete containing more than one admixture should be assessed by trial mixes to ensure the desired combination of effects is obtained.

Novatech CN is suitable for use with ordinary Portland cement. Contact the CCI Technical Service Department for advice on the use with sulphate resisting cements and cement replacement materials.

Dispensing

The correct quantity of **Novatech CN** should be measured by means of a recommended dispenser. The admixture should then be added to the concrete with the mixing water to obtain the best results. Contact the CCI Technical Service Department for advice regarding suitable dispensing equipment and its installation.

Curing

As with all structural concrete, good curing practice should be maintained.

Dosage

The dosage of **Novatech CN** should be as determined in the concrete mix specification, depending on the chloride ions expected at the surface of the steel within the life expectancy of the concrete structure.

Based upon FHWA recommended 0.90 chloride to nitrite ratio 30% CaNO₂ Sol.

Chloride threshold kg /m ³	Recommended dosage of Novatech CN (L/m ³)
3.62	15
4.21	17.5
5.4	22.5
5.99	25
6.39	27.3
7.18	30

Dosage is normally in the range of 7.5 L to 22.5 L/m³ (~2% to 6% by weight of cement). The following table may be used for guidance. The level of corrosion inhibition increases with dosage.

Limitations

Normal precautions for cold weather concreting should be followed where **Novatech CN** is used.

Packaging

200 kg HDPE barrels.

Storage & Shelf life

12 months if stored above 5°C and below 50°C in the tightly sealed original containers.

Novatech CN is an oxidising agent and should be stored away from reducing agents and combustible materials.

Fire

Novatech CN is water-based and nonflammable but should be stored away from combustible materials.

Precautions

Novatech CN is toxic and should not be swallowed or allowed to come into contact with skin and eyes.

Health & Safety

- ✓ Wear hand gloves, safety shoes and safety goggles while using and handling the product.
- ✓ In case eyes or mouth are affected, wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet (MSDS). The MSDS is available on www.ccichemicals.in or contact us at info@ccichemicals.in.

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