

CORROSION INHIBITING ADMIXTURE

Description

Corrotech CI calcium nitrite based corrosion-inhibiting admixture is used for reinforced concrete. Corrotech CI admixture contains a minimum of 30% active ingredients by mass and meets ASTM C 494/C 494M requirements for Type C, accelerating admixtures as well as the requirements of ASTM C 1582/C 1582M.

Uses

Recommended for use in:

- All types of steel reinforced concrete, including precast/prestressed and post-tensioned concrete applications
- Parking garages, bridge decks, marine structures, slabs, floors and other reinforced concrete applications requiring corrosion protection against chlorides from de-icing salts or marine exposure
- Strength-on-demand concrete, such as 4x4 concrete

Advantages

- Calcium Nitrite acts as a corrosion inhibitor in reinforced concrete.
- Can be used in conjunction with other mixtures.
- Extended service life of reinforced concrete structures
- Set acceleration, which may be desirable in cold weather applications

Technical Data

- | | |
|------------------------------|-----------------------------------|
| • Appearance | : Pale straw yellow colour liquid |
| • Chloride content (BS 5075) | : Nil |
| • Calcium nitrite content | : Min 30% |
| • Specific Gravity at 27°C | : 1.15±0.05 |

Standard Compliance

Corrotech CI has been approved by the British Board of Agr^{ic}ment under Certificate No. 04/4171. Corrotech CI conforms with ASTM G109 and with China Standard YB/T 9231-P8 and JT/T 537.

Instruction for use

Compatibility

Corrotech CI is compatible with other FCSC 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.

Corrotech CI is suitable for use with ordinary Portland cement. Contact your local FCSC for advice on use with sulphate resisting cements and cement replacement

Dispensing

The correct quantity of Corrotech CI 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 your local FCSC office for advice regarding suitable dispensing equipment and its installation.

Curing

As with all structural concrete, good curing practice should be maintained. Water spray, wet hessian or a Curewell spray

Estimating

Corrotech CI is available in drum or bulk supply. For larger users, storage tanks can be supplied. Details of specific packaging volumes are available on request.

Packaging

Corrotech CI is available in 250 kg HDPE drums

Storage and Shelf life

Corrotech CI has a minimum shelf life of 12 months provided the temperature is kept within the range of 20°C to 40°C.

Corrotech CI is an oxidizing agent and should be stored away from reducing agents and combustible materials.

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Coverage

Dosage is normally in the range of 15 to 45 litre / m³ (approx. 4 - 12 % by weight of cement). The following table may be used for guidance. The level of corrosion inhibition increases with dosage.

Typical Dosage

The dosage of Corrotech CI 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 Recommended dosage of calcium nitrite admixture

(Kg/m ³)	(litres/m ³)
3.5	30.0
4.2	35.0
5.5	45.0
6.0	50.0
6.4	55.0
7.2	60.0

Cleaning and disposal

Spillages of Corrotech CI should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Do not allow Corrotech CI to enter rivers or drains. The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

Safety precautions

Corrotech CI is toxic and should not be swallowed or allowed to come into contact with skin and eyes. Wear suitable protective gloves and goggles. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately - **do not** induce vomiting.

For further information, please consult Material Safety Data Sheets for the above products.

Fire

Corrotech CI is water based and non-flammable but should be stored away from combustible materials.

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

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 labour involved in the application are beyond our control.

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