



# EUCON CIA

## CORROSION INHIBITING ADMIXTURE

### DESCRIPTION

EUCON CIA is a Calcium Nitrite based admixture designed to inhibit the corrosion of steel reinforcement in concrete. This product contains a 30% Calcium Nitrite solution. When used at recommended dosage rates, this product introduces the proper, industry recognised amount of anodic inhibitor.

### PRIMARY APPLICATIONS

- Exterior steel reinforced concrete
- Structural and plain concrete
- Parking decks and exposed balconies

### FEATURES/BENEFITS

- Calcium Nitrite based formula used for many years in the concrete industry
- Chemically inhibits the corrosion process
- Reduces the need for additional accelerating admixtures in cold weather
- Compatible with other commonly used Euclid Chemical admixtures
- Dosage rate is directly related to expected chloride concentration
- Increases protection for reinforcement in concrete

### TECHNICAL INFORMATION

#### Typical Engineering Data

The following results were developed under laboratory conditions.

Specific Gravity                                      1.10 to 1.20

#### Slump

EUCON CIA has little effect on the slump of concrete.

### PACKAGING

EUCON CIA is packaged in bulk, 200L drums.

### SHELF LIFE

2 years in original, unopened container

### SPECIFICATIONS / COMPLIANCES

ASTM Classification C 494 Type C and E

### DIRECTIONS FOR USE

#### MIX DESIGNS

It is strongly recommended that optimum mix trials be made before the start of job site pours. This will allow the ready-mix concrete producer to determine the proper batching sequence and the required dosage of other admixtures needed to deliver the specified concrete mix to the job site.

EUCON CIA may be added with the concrete batch water. It should not be mixed with any other admixture prior to being introduced into the concrete mixer. Mix designs are supplied upon request.

## DOSAGES

### Corrosion Inhibitor

The recommended addition rates range for **EUCON CIA** Corrosion Inhibitor is from 10 - 30 L/m<sup>3</sup>. The Chloride to Nitrite ratio is important. The project specification will indicate or specify the amount of chloride ions protection necessary. The dosage rate of **EUCON CIA** is directly related to the level of chloride protection and can be chosen from Table 1. **EUCON CIA** will accelerate concrete setting times at all recommended dosages. To counteract this acceleration use a retarder.

When no specified chloride ion protection level is specified contact your local Euclid sales representative.

### Set Acceleration

If used as an accelerator the **EUCON CIA** dosage range is 650 - 5870 mL per 100 kg of cementitious materials.

### MIX WATER REDUCTION:

It is necessary to adjust the mix water to account for the water in **EUCON CIA**, Subtract 0.85L of water per litre of **EUCON CIA**.

| EUCON CIA L/m <sup>3</sup> | Chloride kg/m <sup>3</sup> |
|----------------------------|----------------------------|
| 9.9                        | 3.6                        |
| 12.4                       | 4.7                        |
| 14.9                       | 5.9                        |
| 17.3                       | 6.8                        |
| 19.8                       | 7.7                        |
| 22.3                       | 8.4                        |
| 24.8                       | 9.3                        |
| 29.7                       | 9.5                        |

## CLEAN UP

Clean tools and equipment with water before concrete hardens.

## PRECAUTIONS / LIMITATIONS

- Store at temperatures above 10 - 32°C.
- Do not dispense directly onto dry cement.
- Quality concrete is necessary to slow the ingress of chloride into the concrete. According to ACI 318, the "Building Codes Requirements for Reinforced Concrete" requires certain design constraints, such as maximum water to cement ratio and providing adequate cover over the reinforcing steel. All pertinent codes and guides should be consulted prior to final approval of mix design.
- Additional protection can be achieved by using high range water reducing admixtures to reduce the water to cement ratio. Also, the use of a silica fume admixture can be used to reduce concrete permeability.
- In all cases, consult the Safety Data Sheet before use.

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