



RECKON
CHEMICALS (PVT) LTD.

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RECPLAST CIA2

CORROSION INHIBITING ADMIXTURE

DESCRIPTION

RECPLAST CIA2 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 recognized 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 Reckon 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..... 1.27 to 1.33

Unit Weight..... 10.4 to 11.3 lb. /gal

Freezing point..... 0°F (-18°C)

Air Entrainment RECPLAST CIA2 may slightly reduce the entrained air content. It may be necessary to increase the dosage of the air-entraining admixture to compensate for this loss. AIR MIX 200 is an acceptable air entraining agent. RECPLAST CIA2 and the air-entraining admixture must be added separately to the concrete mix. Slump RECPLAST CIA2 has little effect on the slump of concrete.

PACKAGING

RECPLAST CIA2 is packaged in bulk, (1000 L) tanks, and (210 L) drums.

SHELF LIFE

2 years in original, unopened container.

SPECIFICATIONS/COMPLIANCES

- ASTM Classification C 494 Type C
- AASHTO Classification M 194 Type C
- Corps of Engineers Classification CRD C87 Type C

DIRECTIONS FOR USE

Mix Design It is strongly recommended the 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.

RECPLAST CIA2 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

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 RECPLAST CIA2 is directly related to the level of chloride protection and can be chosen from Table 1.

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

Table 1.

RECPLAST CIA2 Dosage Rates vs Chloride

Protection

RECPLAST CIA2 gal/ yd³-----
Chloride lb / yd³

2.0----- 6.0

2.5----- 8.0

3.0----- 9.9

3.5----- 11.5

4.0----- 13.0

4.5----- 14.1

5.0----- 15.6

6.0----- 16.0

Table 2.

RECPLAST CIA2 Dosage Rates vs Retarder
100 dosage

Reckon Retarder 100

RECKON CIA gal/ yd³----- @70°F
oz/cwt

3.0 to 4.0----- 3 to 5

4.0 to 5.5----- 4 to 7

5.5 to 6.0----- 5 to 8

Set Acceleration: RECPLAST CIA2 will accelerate concrete setting times at all recommended dosages. **Mix Water Reduction:** It is necessary to adjust the mix water to account for the water in RECPLAST CIA2, Subtract 7.0 lbs. or 0.85 gallons of water per gallon of RECPLAST CIA2. **Cement and Admixture Compatibility** RECPLAST CIA2 is compatible with all types of portland cements, concrete and concrete containing pozzolans. RECPLAST CIA2 can be used in concrete mixes with other admixtures including air entraining admixtures, water reducers, retarders, superplasticizer, microsilica, fly-ash and slags. Each admixture must be added separately to the concrete mix.

PRECAUTIONS/LIMITATIONS

- Store at temperatures above 0°F (-18°C). When RECPLAST CIA2 freezes, its corrosion inhibition is completely restored by thawing and thorough agitation.
- 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 RECKON MSA, a silica fume admixture can be used to reduce concrete permeability.
- In all cases, consult the Safety Data Sheet before use.

CLEAN-UP

Clean tools and equipment with water before concrete hardens.