

k-CNI30

Corrosion Inhibitor for Reinforced Concrete

Description:

k-CNI30 is a calcium nitrate based corrosion inhibiting admixture for steel reinforcement concrete. When mixed in concrete, it forms a passivating protection film around steel reinforcement to prevent corrosion. **k-CNI30** contains minimum 30% active ingredients and other special additives to inhibit corrosion and to improve uniform diffusion of the admixture into the concrete, providing basic corrosion protection for steel reinforced concrete structures.

Advantages & Uses:

- A power full corrosion inhibitor for concrete steel reinforcement
- Easy mixing with concrete
- Extends the service life of reinforced concrete structures.
- No adverse effect on workability, strength or dimensional stability of concrete
- Suitable as a corrosion inhibitor for new concrete structures or in rehabilitation works.
- Provides effective corrosion protection against chlorides in concrete
- Recommended for steel reinforced concrete where longer service lives are desired.

Properties:

Appearance	: Pale Yellow
Specific gravity	: 1.30 + 0.10 @ 25°C
Ph	: 9.0 + 1.0 @ 25°C
Chloride content	: Nil to BS 5075

Standards:

k-CNI30 meets ASTM C 494 interim requirements for Type C, Accelerating admixtures.

Dosage:

The normal dosage range is 5 to 20 liters per m³ of concrete. **k-CNI30** has a high dosage level, calculation of water: cement ratio should include the water added to the mix in the admixture.

k-CNI30 dosed at 5 L/m³ is formulated to provide optimum corrosion protection of reinforced concrete structures in severe corrosive environments and therefore provides excellent corrosion protection in less severe corrosion environments as well. However, it is the responsibility of the user to select and ensure that the dosage meets his required

needs in relation to the chloride levels in the concrete and surrounding the structure and the expected service life of the structure. Below dosage rates are for guidance purposes only:

k-CNI33 Dosage L/m3	Chloride Protection Limit, kg/m3	
	With chloride bearing	All other applications
5	1	
1	2	3
1	3	5
2	4	7
2	6	8
3	7	9

Applicatin:

k-CNI30 will effectively inhibit corrosion in all types of steel reinforced concrete including precast/restressed and post-tensioned applications. Concrete setting times may be accelerated with the use of **k-CNI30**. If desired, a retarding or hydration control admixture may be added to the concrete mixture to offset the acceleration effects of **k-CNI30**. Please contact your local Kenal representative for additional information on set-balancing admixtures for concrete.

Compatibility:

k-CNI30 CNI is compatible with other Kenal admixtures in the same concrete mix. All admixtures should be added to concrete separately and must not be mixed together prior to addition. The performance of concrete should be assessed by trial mixes to ensure the desired combination of effects is obtained. **k-CNI30** is suitable for use with ordinary portland cement. Contact Kenal Technical Department for advice on use with sulphate resisting cement and cement replacement materials

Storage/Packing:

k-CNI30 is available in 1,000-liter mini bulk.
k-CNI30 must be stored under cover, out of direct sunlight, protected from extremes of temperature and it has a minimum shelf life of 12 months provided the temperature is kept within the range of 12°C to 38°C. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

Precuations:

Health: **k-CNI30** does not contain any hazardous substances requiring labeling. It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc. For detailed Health, Safety and Environmental recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.