

X-Mix OCI 12

Technical Datasheet

Migrating Bipolar Organic Corrosion Inhibitor for reinforced concrete with cathodic and anodic protection

Product Description

NCC X-Mix OCI 12 is a premium admixture recommended for all structures made of reinforced concrete, whether normal or pre-stressed. It is especially effective in aggressive environments such as bridges, viaducts, and exposed concrete facades. The product significantly enhances the durability and extends the service life of concrete structures exposed to corrosive conditions, including carbonation, chlorides, and atmospheric attack.

Advantages

- Anodic and cathodic protection
- Contains multiple complex migrating Bipolar Organic corrosion inhibitors Contains passivating functions.
- Reduction of the chloride permeability.
- Reduction of carbonation >85%.
- Highly effective even in presences of chloride salts increased concrete durability.
- It does not contains nitrites and chlorides.

Description

NCC X-Mix OCI 12 liquid admixture composed out of reactive mixture of multi-functional Bipolar Organic corrosion inhibitors which will be migrating and interfacial with anodic and cathodic protection with special efficiency in the Nano- capillary of concrete and mortars.

It can be used to achieve better protection against re-inforcement corrosion. It is active not only in contact with the metal, but also it migrates through the micro porosity of the concrete to reach the reinforcement to ionize consequently provide cathodic and anodic protection.

Product Properties

Consistency	Liquid
Color	Colorless to pale yellow.
Specific Gravity according to ASTM D 2111 (g/cm³) @ 25° C	1.016±0.02.
pH	>10
Main action	Cathodic and Anodic protection.

Specification Compliance

- EN 934-2 requirements.
- ASTM G 109.
- ASTM G 180.
- ASTM C1582 requirements.
- Complies with CSA S413, Section C1.2. For corrosion inhibiting admixtures

NCC X-Mix OCI 12 is a superior technical solution to extend the life time expectancy of re-inforced concrete subjected to aggressive corrosion promoters such as oxygen, humidity, and chlorides from de-icing salts or marine environments etc.

Shelf Life

X-Mix OCI 12 has a minimum shelf life of 12 months under shaded area. Must be protected from direct sunlight and frost.

Dosage

The dosage of NCC X-Mix OCI 12 should be determined based on the specific requirements outlined in the concrete mix specifications.

Typically, NCC X- Mix OCI 12 is recommended for use at a dosage rate of 5 liters per cubic meter (L/m³). This dosage is particularly suitable for concrete structures with congested reinforcement, exposure to aggressive corrosion environments, and chloride exposure.

Ensuring the correct dosage is critical for maximizing the durability and service life of the concrete under such challenging conditions

Compatibility

NCC X-Mix OCI 12 is compatible with other NCC admixtures within the same concrete mix. It is important to add each admixture separately to the concrete, ensuring they are not mixed together prior to addition. The performance of concrete that includes more than one admixture should be evaluated through trial mixes to confirm that the desired combination of effects is achieved. NCC X-Mix OCI 12 is suitable for use with ordinary Portland cement.

For advice on using this admixture with sulphate-resisting cements and cement replacement materials, please contact NCC X-Calibur.

Dispensing

The correct quantity of NCC X-Mix OCI 12 should be measured using a recommended dispenser. To achieve the best results, the admixture should be added to the concrete along with the mixing water.

Technical support

NCC X-Calibur offers comprehensive technical advisory services for on-site assistance, providing expert advice on the selection of admixtures, conducting evaluation trials, and selecting and setting up dispensing equipment. Their team can supply detailed technical data and guidance for the optimal use of admixtures and other products with both fresh and hardened concrete. This ensures that concrete structures achieve the desired performance and longevity, especially in challenging and corrosive environments.

Limitations

Normal precautions for cold weather concreting should be followed where NCC X-Mix OCI 12 is used. When handling NCC X-Mix OCI 12, it is important to wear suitable protective gloves and goggles. In case of splashes on the skin, remove the substance immediately with water. If the product comes into contact with the eyes, rinse immediately with plenty of water and seek medical advice. If swallowed, seek medical attention immediately and do not induce vomiting.

Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists ('ATSsO are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product.

Visit www.ncc.com.eg for a full list of NCC X-Calibur ATSs.

Datasheet Validity

NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on www.ncc.com.eg to ensure you have the latest version.

Warranties

NCC X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price.

NCC X-Calibur does not warrant or guarantee the installation of the products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to X-Calibur in writing within five working days of being detected.

NCC X-Calibur Construction Chemistry Inc. makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.

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