



Centrament Corrodur

(Formerly known as MC-Corrodur)

High Performance chloride free admixture for protection and control of reinforcement corrosion

Product Properties

- Chloride free
- Protects the reinforcement in concrete due to high alkalinity
- Provides durability to reinforced cement concrete and helps prevent future maintenance cost due to repair
- Effective protection against corrosion
- Compatible with all types of cements

Areas of Application

- Recommended for all RCC Structures
- Particularly suitable for structures vulnerable to chloride attack such as bridges, jetties & parking decks, basements etc.,
- Also suitable for roadway surfaces, run off culverts, concrete pipes and concrete in polluted chemical industries areas.
- Can be used in Pre-Cast and Pre-stressed Concrete

Application Notes

General

Centrament Corrodur admixed concrete gives effective protection against corrosion. It is chloride free, easy to use and can be added to the concrete at site or in precast concrete. It is compatible with all types of cement and prevents the future maintenance costs to be incurred on repair, thereby making it economical.

It is well known that the embedded reinforcement in the concrete remains protected due to high alkalinity of concrete and in turn provides durability to the structure. However, concrete by nature of its porosity, constantly remains under attack by environmental pollution, moisture ingress, chlorides and other deleterious chemicals. The durability of concrete itself is affected leading to corrosion of the reinforcement.

Carbonation is a process wherein atmospheric carbon dioxide reacts with calcium hydroxide in the concrete in the presence of moisture or humidity to convert it into calcium carbonate. The pH value in the concrete is between 12.5-13.5. This provides an alkaline environment, passivating the embedded steel reinforcement against corrosion. The carbonation process lowers the pH to below 9 and disturbs this passivating protection for the reinforcement. Chloride ion attack also leads to this condition. The reinforcement begins to rust. The rusted reinforcement occupies 2.5 times its original volume, creating stress that spalls its protective cover. The depth of carbonation depends upon grade of concrete, time and depth of cover to the reinforcement. The process of carbonation is showed in the chart below.

Therefore it is necessary to protect the concrete while casting.

Unchecked corrosion leads to cracking and spalling. This decreases the service life of the structure and causes severe problems in the concrete. The only solution here is costly repairs. The delaminated, spalled surface accelerates the corrosion process compounding the problem. Cost of inhibitory **Centrament Corrodur** is therefore cheaper alternative to the cost of future repair and in many cases inaccessible repair as in marine structures.

Advantages

Centrament Corrodur is recommended for all steel reinforced concrete that will be prone to corrosion during its service life and use, either by carbonation or by chlorides. **Centrament Corrodur** is specially formulated in a way to compensate for decrease of compressive strength normally associated with such type of admixtures. Incorporating a high performance plasticizer in **Centrament Corrodur** provides this compensation.

Instructions for Use

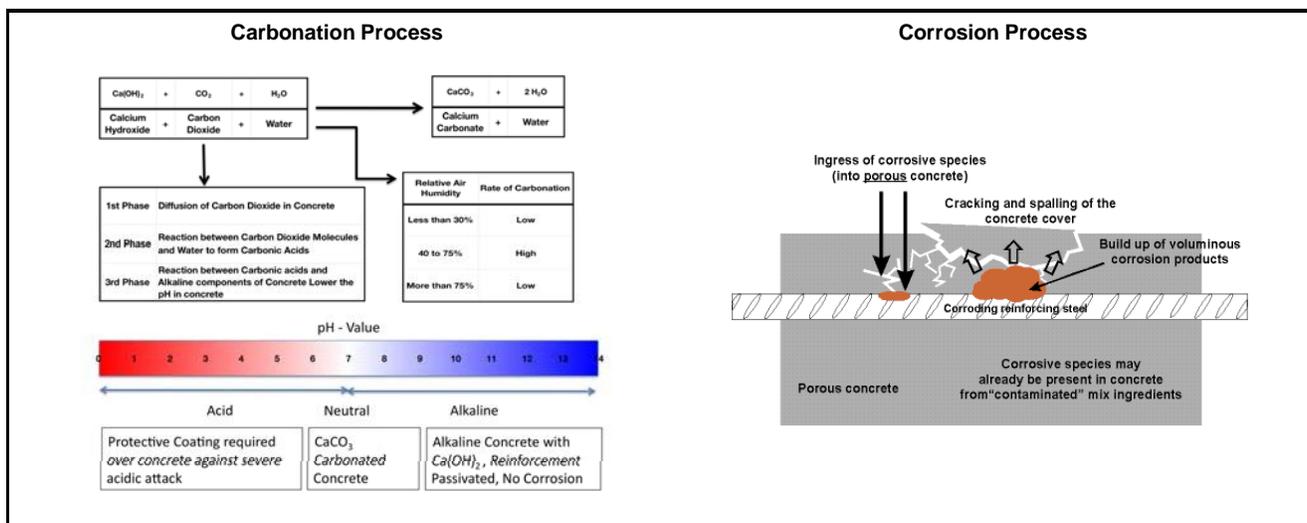
The rate of corrosion of steel depends on the rate at which the chloride-ion or carbon dioxide penetrates the concrete and reaches steel and penetrates the passivating layer. There are two general methods of delaying the progress of these substances to the reinforcement. Increasing depth of cover and using dense concrete. However increasing the depth of cover may not be economical. Densifying the concrete for lowering the permeability is often the most ideal approach to lower penetration of chlorides and carbon dioxide in the concrete.

Centrament Corrodur has the potential to inhibit the corrosion of reinforcing steel in concrete while maintaining the quality of concrete. The addition of **Centrament Corrodur** as an admixture in concrete mitigates the rate of corrosion. **Centrament Corrodur** is an economical alternative to epoxy coated reinforcement and concrete surface coatings.

For enhancing the durability of concrete and its strength **Centrament Corrodur** can be used as an additive, which can be mixed at site.

Centrament Corrodur monitors the levels of corrosion and shields the concrete surfaces from the chloride-ion penetration. The dosage of **Centrament Corrodur** is generally recommended as 3.0% to 6.0% by weight of cement.

Further Instructions / Precautions



Technical Data For Centrament Corrodur

Characteristic	Unit	Value	Comments
Mixing Ratio	% by weight of cement	3.0 to 6.0%	Depending on Application

Product Characteristics for Centrament Corrodur

Type of Product	Corrosion Inhibiting Admixture
Form	Liquid
Colour	Brown
Shelf Life	12 Months from date of Manufacture
Delivery	250 Kg Drums and 30 kg Pails
Storage	In Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost
Disposal	Empty packs completely and dispose off carefully to protect our Environment

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees, which may differ from the data contained in our information sheets, are only binding if given in written form. The accepted engineering rules must be observed at all times. E. & O.E.

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