



STEELCARE

Corrosion Resistant Admixture

CORROSION CONTROL MADE EASIER

Just 250 ml Per Bag of Cement

Maintain Corrosion Free Service Life
of Reinforced Structures



Technology Developed by

CSIR-CECRI Karaikudi



(Ministry of Science & Technology, GOVT. OF INDIA)

- Corrosion Resistant Admixture for Concrete
- User & Eco Friendly Product
- It protects the steel even in the presence of high amount of chlorides
- Saves Time, Space & Labor Cost
- Cutting Edge Technology to Control Corrosion in RCC Structures in Marine, Aggressive, Mild & Moderate Environment
- Easy Solution for Typical Problem



ALTERNATE TO REBAR COATING



Corrosion Resistant Admixture For Reinforcement Bars Embedded in Concrete. Manufactured by Cleanflo India Private Limited under License of CSIR-CECRI, Karaikudi, (Under The Ministry of Science & Technology, GOVT. OF INDIA, Foremost Scientific And Industrial Research Organisation in the World).

Corrosion in reinforced concrete structures is the major cause of premature failure of infrastructures like flyover, concrete bridges, buildings industrial & marine structures etc. The most prevalent deterioration mechanism of reinforcement corrosion involves contact of steel with depassivating anions such as chloride & sulphate or the reduction of pH in concrete as a result of carbonation of the cement binder. The crucial characteristic of corrosion mechanism is that hydrated iron oxide compounds formed due to corrosion occupy greater volume than original reactants (metallic iron). As the volume of accumulated corrosion product increases, pressure is generated within the concrete, which may exceed the tensile capacity of concrete and result in cracking, delamination and spalling.

Cleanflo India Private Limited (formerly known as Deioners Specially Chemicals (P) Ltd.) is the licensee of Central Electrochemical Research Institute (CECRI), Karaikudi, Tamilnadu, a national laboratory affiliated to CSIR, for their process of corrosion inhibitor to enhance corrosion free service life of RCC Structures that provides protection to reinforcement bars against corrosion.

DESCRIPTION OF THE PRODUCT

CLEANFLO - STEELCARE is an excellent corrosion inhibitor system to combat corrosion of reinforcement bars embedded in RCC structures exposed in marine, aggressive, mild and moderate environments. (Protects from high Chloride) **CLEANFLO - STEELCARE** form a dense passive film on the reinforcement bars to protect them against the corrosive species like chloride, sulphite, carbonation, etc.

Due to formation of passive film, the corrosion free life of RCC structures will be enhanced by several folds.

In addition, there is no adverse effect on the concrete properties.

Corrosion inhibitor for reinforcement bar is a mixed type of inhibitor which retards anodic as well as cathodic reactions and forms impervious layer on metal surface.

APPLICATIONS :

CLEANFLO - STEELCARE is highly suitable for all types of RCC structures situated in **Marine, Aggressive, Mild and Moderate environments** like, highway bridges, flyovers, industrial structures, elevated structures, metro Projects, marine structures, jetties, docks, railway sleepers, refiners, power plant structures, residential buildings, housing project, hydraulic structures, airports, runways etc.

INIMITABLE ADVANTAGES :

1. User & Eco friendly
2. Extremely suitable for high chloride environments
3. Non toxic in nature
4. Does not affect the physical properties of concrete
5. Involves a simple step of adding the admixture during the preparation of concrete
6. Alternate to rebar coating
7. Does not affect the bond strength of concrete

Protects the reinforcement even in the presence of chlorides

- Compatible with all grades of Indian cements • Safe to Concrete, Safe to Environment

Dosage of Corrosion Inhibitor For Concrete

250 ml of Admixture per bag of Cement, may be added with concrete batch water. it should not be mixed with any other admixture prior & being introduced in the concrete mixture.

(It is essential that **CLEANFLO - STEELCARE** be made part of the trial mix along with desired admixtures.)

Point of Addition

CLEANFLO - STEELCARE is directly added just like other admixtures at the batching plant after dispersing it in a little batch water. It can also be added to the transit mixer at the site, at the time of discharge.

Product specification

- | | | |
|---------------------|---|-------------|
| 1. Physical State | : | Liquid |
| 2. Appearance | : | Pale Yellow |
| 3. pH | : | Minimum 9.0 |
| 4. Specific Gravity | : | 1.10 ± 0.50 |

BULK SUPPLY : Bulk deliveries can be offered against ready stock from our different delivery points located in different parts of the country.

PACKING : Normally packed in 220 Ltr. drums duly sealed. Each and every drums indicates batch number, date, month and year of manufacturing, net weight, tare weight, patent number etc.

SELFLIFE : is 18 months from the date of manufacturing in sealed condition when stored at ambient temperature.

HANDLING AND PRECAUTIONS :

- Keep the container closed when not in use
- Keep away from direct heat and sunlight in a shaded area.

FACILITIES :

It is needless to mention here that all Cleanflo products are being manufactured at our most modern manufacturing unit strictly as per relevant standards. The product, right from raw materials to finished products, are subjected to strict quality control checking. The raw materials are being procured from genuine manufactures. The finished products undergo batch-wise testing at our site lab.

Effectiveness of CLEANFLO - STEELCARE Long term studies carried out at CECRI conclusive of the fact that **CLEANFLO - STEELCARE** resists corrosion and significantly decreases the corrosion rate.

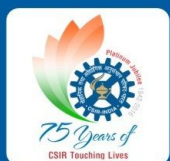
JUST ADD CLEANFLO - STEELCARE IN CONCRETE AND IMPROVE THE SERVICE LIFE OF STRUCTURE MANY FOLD.



STEELCARE

Corrosion Resistant Admixture

Research Product of



C.S.I.R

Council of Scientific & Industrial Research



Under the Ministry of Science & Technology Govt. of India

Most Economical Corrosion Resistant Admixture
Developed by CSIR-CECRI-Karaikudi
to control corrosion on reinforcement bar

- Just add recommended dosages of CLEANFLO-STEELCARE in Concrete batch water while making Concrete
- The most prevalent deterioration mechanism of reinforcement corrosion involves contact of steel with depassivating anions such as Chloride (C) & Sulfur (S) or the reduction of pH in concrete as a result of carbonation of the cement binder.
- Does no effect the physical properties of concrete.



Manufactured by :

CLEANFLO INDIA PRIVATE LIMITED

ISO 14001:2015 | OHSAS 18001:2007 | ISO 9001:2015

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