
Sealing Solution for Reinforcement Bars as per Indian Patent No. 112440/67 CECRI Karaikudi Method



CSIR/CECRI
Know-How

Introduction:

Corrosion in reinforced concrete structures is the major cause of premature failure of infrastructures like flyovers, concrete bridges, buildings 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 ultimately exceed the tensile capacity of concrete and result in cracking, delamination and spalling.

Cleanflo India Pvt. Ltd. is the licensee of Central Electrochemical Research Institute (CECRI), Karaikudi, Tamilnadu, a National Laboratory affiliated to CSIR, for their process of Sealing Solution.

Product Specifications:

Appearance	:	Colour-less liquid
pH	:	12.25 \pm 0.25
Specific Gravity	:	1.09 \pm 0.02

Application:

The sealing treatment should be performed over the coated surface immediately after final setting of the top coat. Sealing solution can be applied by brushing, dipping or spraying method.

Advantages

Sealing solution helps to seal the Inhibited Cement Slurry Coating and increases the tolerable limit of chloride.

Caution:

If reinforcement bar is to be bent or be given some specific shape, this must be done before applying the sealing solution. If it is done after application of sealing solution, it would result in breakage of film and then again touching will be required. The treated bars must be handled and stacked carefully.



Site Arrangement Required:

- A drying platform is required for drying of treated bars.
- Storage room for the chemical
- Miscellaneous items like bucket, brushes, cotton waste, small weighing balance etc. are required at site.
- M. S. Tank of suitable size for coating by dipping method.

Handling & Precautions:

Keep the container closed when not in use

Keep away from direct heat and sunlight in a shaded area.

Bulk Supply:

Bulk deliveries can be offered against ready stock from our centrally located delivery points at Northern part of India, through our delivery vans.

Packing & Marking

Normally, 120 kg. & 240 kg. HDPE drum packing is available, duly sealed. However, other convenient packings can be made available on specific demand. Each and every drum indicates batch number, date, month & year of manufacturing, net weight, tare weight, Patent No. etc.

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