

Promoting Use and Advancing Quality of Epoxy-Coated Reinforcing Steel.



Welcome

How much do you know about durability and corrosion? Most designers know a lot more about design than about construction materials. Fortunately, a number of excellent research programs have been conducted over the past 40 years looking at corrosion mechanisms, and how we can

reduce its damaging effects. From this research it has been found that it takes as little as 0.01 in (25 µm) of corrosion to cause cracking in concrete; however this value is dependent on the amount of concrete cover over the reinforcing.

Good quality concrete is the primary protection barrier against the ingress of aggressive species, such as deicing salts and marine waters. The concrete should be made using an appropriate low water-cement ratio with appropriate cover placed over the reinforcing steel. Care should be taken to ensure that appropriate methods are used to minimize concrete cracking. Additional consideration of thermal and early age cracking should be made. Poor mixture design and placement practices may result in less than expected durability and expensive repairs.

When selecting reinforcing bars, the expected design life of the structure must be carefully considered. Epoxy-coated bars have been predicted to last at least 100 years in marine environments and have been extensively tested over the past 40 years. They are generally manufactured using over 95 percent of recycled materials and use relatively low processing energy. Unlike other products, epoxy-coated reinforcing steel is readily available in any length or diameter from many suppliers. Only epoxy-coated reinforcing bar facilities are certified by the Concrete Reinforcing Steel Institute (CRSI) and unlike other products, epoxy-coated bars may be fabricated and on jobsites within days of ordering.

For more information on the benefits of epoxy-coated bars, visit www.epoxyinterestgroup.org

Projects Using Epoxy-Coated Reinforcing Steel Wanted

EIG wants to feature your project in upcoming editions of Anti-Corrosion Times and our Project Gallery. All project types are welcome. Please send basic information on the project and information on how to access photography (construction and/or finished, all photo credits) to info@epoxy.crsi.org.

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“Peak performers develop powerful mental images of the behavior that will lead to the desired results. They see in their mind’s eye the result they want, and the actions leading to it.”

— Charles A. Garfield, American author



Projects

Wacker Drive

Chicago, Illinois

Wacker Drive in Chicago was originally built in the 1920s; however, it was originally proposed by the architect Daniel Burnham as part of his 1909 Plan for Chicago. This 2-level structure serves as a major thoroughfare through Chicago, running along the south side of the Main Branch of the Chicago River and the East Side of the south branch of the Chicago River. Originally, the upper level was intended for local traffic, while the lower level was for through traffic and trucks, servicing buildings along the road. Currently, the two roadways handle over 70,000 vehicles per day.

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Ashmont Train Station

Dorchester, Massachusetts

The Ashmont station on the Red Line in Dorchester, Mass., serves users of the subway, Mattapan trolley and buses. The design for the station reconstructs and modernizes the station, including lengthening the existing platforms and creating a new turnaround location for the trolleys.

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Hood Canal Bridge

Olympic and Kitsap, Washington State

The Hood Canal Bridge carries Washington State Route 104 across Hood Canal connecting the Olympic and Kitsap Peninsulas. The bridge, first opened in 1961, provides a vital link between these two peninsulas, carrying approximately 16,500 vehicles per day. The 7,869 ft long bridge has a 600 ft draw span to allow for shipping.

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New Publication from the Epoxy Interest Group

The following document may be downloaded from www.epoxyinterestgroup.org or if you wish hard copies, please contact us at info@epoxyinterestgroup.org



Epoxy-coated Reinforcing Steel in Parking Garages

This 6-page document provides guidance on the use of epoxy-coated reinforcing steel to protect concrete parking garages. Over \$600 million is spent yearly to repair parking decks and structures without epoxy-coated reinforcing steel may show deterioration within 10 to 15 years.

Epoxy Interest Group now on Facebook

Become a fan of the Epoxy Interest Group on Facebook and stay updated as we find new research and projects.



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Questions from the Field

Question: *Where can I purchase Epoxy-Coated Steel Reinforcing Bar?*

Answer: Epoxy-Coated Steel Reinforcing Bar is produced and inventoried nationwide. Currently, 37 plants are certified under the 20-year old CRSI Fusion-bonded Epoxy Coating Applicator Plant Certification program. For most current CRSI certified Epoxy-Coated Steel Reinforcing Bar Manufacturers please see www.crsi.org.

Editors Note:

We hope that you find information on this website useful and please contact us if additional information is required.