



Field Repair — EPOXY-COATED REINFORCING STEEL

Epoxy-coated reinforcing steel has been used for more than 40 years to reduce expensive and disruptive repairs to concrete structures caused by corrosion. Proper use and handling of the steel during the construction process will increase the corrosion-free life of concrete structures.

FREQUENTLY ASKED QUESTIONS

Where can I get the two-part epoxy repair materials?

The repair materials can be obtained from the epoxy-coated bar fabricator.

Is it permissible to use a spray can material to repair damaged epoxy-coated reinforced steel?

The epoxy-coated reinforcing steel industry does not recommend one-part spray materials for repair of epoxy-coated reinforcing steel as it is difficult to obtain appropriate coating thickness. EIG and the CRSI Certified Fabricators recommend the use of a two-part repair material to ensure maximum corrosion protection. Repair materials for epoxy-coated reinforcing steel are required to meet either ASTM A775 or A934.

JOBSITE BASIC STEPS

Construction documents may refer to ASTM D3963 *Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Reinforcing Steel* or ACI 301 *Specifications for Structural Concrete*. The requirements in these specifications should be followed. The general provisions are as follows:

Visual Assessment

- If the coated bar has more than 2% of coating damage in any given 1-ft section, it should be replaced.
- If the total bar surface covered by patching material exceeds 5% in any given 1-ft section, the bar may be rejected. This limit does not include sheared or cut ends.

Repair

- Prepare areas using a wire brush to remove rust and other contaminants.
- All visible coating damage should be repaired using a two-part epoxy approved by the coating manufacturer.
- Repair materials should conform to ASTM A775 or A934.
- Repairs should be strictly conducted according to the written instructions furnished by the patching material manufacturer. Repair materials should be mixed according to the manufacturer's directions and should be used within the specified pot life.
- Provide sufficient time for repair materials to cure prior to placement of the concrete.





Field Handling – EPOXY-COATED REINFORCING STEEL

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JOB SITE BASIC STEPS

Handling and Storage

- Lift using a spreader bar or strong-back with multiple pick-up points to minimize sag. Use nylon or padded slings.
- Unload as close as possible to the point of concrete placement to minimize rehandling.
- Store bundles of steel on suitable material, such as timber cribbing.
- If exposed outdoors for more than 30 days, cover the bundles with a suitable opaque material that minimizes condensation.
- Store coated and uncoated steel separately.

Bar Placement

- Lift and set the steel into place without dragging.
- Use plastic or bar supports coated with non-conductive material.
- Use coated tie wire.
- Use power shears or chop saw to cut steel and not flame cutting.

Concrete Operations

- Minimize traffic over the steel.
- Avoid traffic and concrete hoses on placed steel.
- Use plastic headed vibrators to consolidate concrete.

Coating Repair (SEE REVERSE SIDE)

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