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CODE

20.5.1.4.2 For prestressed concrete members classified as Class T or C in 24.5.2 and exposed to corrosive environments or other severe exposure categories such as those given in 19.3, the specified concrete cover for prestressed reinforcement shall be at least one and one-half times the cover in 20.5.1.3.2 for cast-in-place members and in 20.5.1.3.3 for precast members.

20.5.1.4.3 If the precompressed tension zone is not in tension under sustained loads, 20.5.1.4.2 need not be satisfied.

20.5.2 *Nonprestressed coated reinforcement*

20.5.2.1 Nonprestressed coated reinforcement shall conform to Table 20.5.2.1.

Table 20.5.2.1—Nonprestressed coated reinforcement

Type of coating	Applicable ASTM specifications		
	Bar	Wire	Welded wire
Zinc-coated	A767	Not permitted	A1060
Epoxy-coated	A775 or A934	A884	A884
Zinc and epoxy dual-coated	A1055	Not permitted	Not permitted

20.5.2.2 Deformed bars to be zinc-coated, epoxy-coated, or zinc and epoxy dual-coated shall conform to 20.2.1.3(a), (b), or (c).

20.5.2.3 Wire and welded wire reinforcement to be epoxy-coated shall conform to 20.2.1.7(a).

20.5.3 *Corrosion protection for unbonded prestressing reinforcement*

20.5.3.1 Unbonded prestressing reinforcement shall be encased in sheathing, and the space between the prestressing reinforcement and the sheathing shall be completely filled with a material formulated to inhibit corrosion. Sheathing shall be watertight and continuous over the unbonded length.

COMMENTARY

tionally, for corrosion protection, a specified concrete cover for reinforcement not less than 50 mm for walls and slabs and not less than 65 mm for other members is recommended. For precast concrete members manufactured under plant control conditions, a specified concrete cover not less than 40 mm for walls and slabs and not less than 50 mm for other members is recommended.

R20.5.2 *Nonprestressed coated reinforcement*

R20.5.2.1 Zinc-coated (hot-dipped galvanized) bars (ASTM A767), epoxy-coated bars (ASTM A775 and A934), and zinc and epoxy dual-coated bars (ASTM A1055) are used in applications where corrosion resistance of reinforcement is of particular concern such as in parking structures, bridge structures, and other highly corrosive environments.

R20.5.3 *Corrosion protection for unbonded prestressing reinforcement*

R20.5.3.1 Material for corrosion protection of unbonded prestressing reinforcement should have the properties identified in 19.1 of Breen et al. (1994).

Typically, sheathing is a continuous, seamless, high-density polyethylene material that is extruded directly onto the coated prestressing reinforcement.

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