

# **FORTA-FERRO® Guide Specification for Synthetic Fiber-Reinforced Portland Cement Concrete Slabs on Ground**

## Section 03240 Fiber Reinforcement

### Part 1 General

- 1.1 Section Includes
  - A. Fiber reinforcement for cast-in-place portland cement concrete for slabs on ground.
- 1.2 Related Sections
  - A. Section 03300 Cast-in-Place Concrete.
- 1.3 References
  - A. American Society for Testing and Materials (ASTM) C1116 Standard Specification for Fiber-Reinforced Concrete, latest edition.
  - B. American Concrete Institute (ACI) 360 Slabs on Ground, latest edition.

### Part 2 Products

- 2.1 Manufacturer
  - A. The FORTA Corporation  
100 FORTA Drive  
Grove City, PA 16127  
(800) 245-0306  
[www.forta-ferro.com](http://www.forta-ferro.com)
- 2.2 Fiber Reinforcement Description for FORTA-FERRO®
  - A. Fiber lengths are greater than 2.0 inches.
  - B. Before mixing, fibers are collated by twisting with an initial bundle aspect ratio less than 20.
  - C. Pre-mixing, macro monofilament fibers are bundled and have an aspect ratio of 80.
  - D. Post mixing, fibers are dispersed and have an aspect ratio of 80 or greater.
  - E. Fibers are made of copolymer virgin materials that are inert.
  - F. Fibers are sized to be flexible and not stiff to ensure fibers 'lay down' and are easy to finish.
- 2.3 Fiber Dosage
  - A. Add fiber reinforcement at these dosages:
    - 1. Dosage 3.0 lbs/cy; temperature and shrinkage reinforcement only.
    - 2. Dosage 5.0 lbs/cy; for moderate benefits to reduce cracking.
    - 3. Dosage 7.5 lbs/cy; for best benefits and highest probability to reduce cracking from tension, curling, and fatigue.
- 2.4 Batching and Mixing
  - A. After all or a portion of the concrete has been loaded into the truck or mixer, add fiber reinforcement by mixer ready dispersible bags at the prescribed dosage with the drum turning.
  - B. After fibers have been added, add water-reducing admixture (polycarboxylate superplasticizer).
  - C. Follow ACI procedures to mix 5 minutes once all ingredients are in the drum.

### Part 3 Execution

- 3.1 Placement
  - A. Place concrete in accordance with provision of Section 03300 Cast-In-Place Concrete and with additional instructions as follows.
  - B. Use slump testing as consistency truck to truck not as a measure of workability.
- 3.2 Finishing
  - A. Verify timing for final finish by impression depth into surface and other judgments to ensure proper finishing timing.
  - B. Use steel/magnesium tools.
- 3.3 Schedules
  - A. Use fiber reinforced concrete in described locations scheduled as follows for each dosage.

END OF SECTION