

# **FACT-DATA**<sup>©</sup>

# MANUFACTURER

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# **GENERAL DESCRIPTION**

**FORTA FERRO**<sup>®</sup> is an **easy to finish**, color blended fiber, made of 100% virgin copolymer/ polypropylene consisting of a twisted bundle non-fibrillating monofilament and a fibrillating network fiber, yielding a high-performance concrete reinforcement system. **FORTA FERRO**<sup>®</sup> is used to reduce plastic and hardened concrete shrinkage, improve impact strength, and increase fatigue resistance and concrete toughness. This **extra heavy-duty** fiber offers maximum long term durability, structural enhancements, and effective secondary/temperature crack control by incorporating a truly **unique synergistic fiber system** of long length design. **FORTA FERRO**<sup>®</sup> **is non-corrosive, non-magnetic, and 100% alkali proof!** 

# **APPLICATIONS**

**FORTA FERRO**<sup>®</sup> is mainly used with performance concrete applications such as industrial floors, bridge decks, shotcrete, loading docks, precast products – anywhere that steel reinforcement reduction or replacement is the objective. Contact FORTA Corporation for design assistance.

#### INSTALLATION

Recommended dosage rate of **FORTA FERRO**<sup>®</sup> is **0.2% to 2.0% by volume of concrete** (3 to 30 lbs. per cubic yard) added directly to the concrete mixing system during, or after, the batching of the other ingredients and mixed at the time and speed recommended by the mixer manufacturer (usually four to five minutes).

# PHYSICAL PROPERTIES

Materials.....Virgin Copolymer/Polypropylene Form.....Monofilament/Fibrillated Fiber System Specific Gravity......0.91 Tensile Strength......90-110 ksi. (620-758 MPa) Length......2.25" (54mm), 1.5" (38mm) Color.....Gray Acid/Alkali Resistance....Excellent Absorption .....Nil Compliance.....A.S.T.M. C-1116

# AVAILABILITY

**FORTA FERRO**<sup>®</sup> can be purchased from FORTA Corporation or an authorized FORTA<sup>®</sup> products distributor, dealer or representative. Orders are shipped within 24 hours by small package services, commercial carrier, or air freight.

# PACKAGING

Convenient incremental pound or kilogram mixer-ready bag packaging.

# WARRANTY

**FORTA FERRO**<sup>®</sup> fiber is warranted to be free of defects and to meet all quality control standards set by the manufacturer. FORTA Corporation has no control over the design, production, placement or testing of the concrete products in which **FORTA FERRO**<sup>®</sup> is incorporated, therefore FORTA Corporation assumes no responsibility for the end products.

# FORTA FERRO®

**FORTA Corporation's** technical recommendations regarding synthetic fiber characteristics are based on years of engineering research and scores of concrete projects. FORTA<sup>®</sup> has developed a simple "4-C's" formula to help the specifier choose the right fiber for any concrete project application. By making a decision with each of the **FORTA<sup>®</sup>** "4-C's" categories – <u>C</u>onfiguration, <u>C</u>hemistry, <u>C</u>ontents, and <u>C</u>orrect Length–specifiers are assured of obtaining the desired fiber performance level for a given project. The following 4-C's Formula Specification has been prepared to accommodate the stated reinforcement objective for this FORTA<sup>®</sup> product grade.

**REINFORCEMENT OBJECTIVE:** To inhibit plastic and settlement shrinkage cracking prior to the initial set, and to reduce hardened concrete shrinkage cracking, improve impact strength, and enhance concrete toughness and durability as an alternate secondary/temperature/structural reinforcement.

# DIVISION – CONCRETE SECTION – CONCRETE REINFORCEMENT SUB-SECTION – SYNTHETIC FIBROUS REINFORCEMENT

Synthetic fibrous reinforcement shall be used in the areas denoted in plans, and shall comply with the following fiber characteristics:

- 1. Configuration Fiber shall be a synergistic combination of a twisted-bundle nonfibrillating monofilament and a fibrillating network fiber system.
- 2. Chemistry Fiber shall be made of 100% virgin materials in the form of fully-oriented copolymer/polypropylene, gray in color.
- 3. Contents Fiber shall be used at a dosage rate of 0.2% to 2.0% by volume of concrete (3 to 30 lbs. per cubic yard).
- 4. Correct Length Fiber Length shall be 2.25" (54mm).

Compliance: Fibers shall comply with A.S.T.M. C-1116 "Standard Specification for Fiber Reinforced Concrete and Shotcrete". The approved product is FORTA FERRO<sup>®</sup> structural fiber as manufactured by FORTA Corporation, Grove City, PA, U.S.A. Phone: 1-800-245-0306 or 1-724-458-5221; Fax: 1-724-458-8331.

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