



# CAST-MASTER®

## FACT-DATA<sup>©</sup>

### MANUFACTURER

FORTA CORPORATION, 100 Forta Drive, Grove City, PA, U.S.A., 16127-6399  
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### GENERAL DESCRIPTION

FORTA® CAST-MASTER® is an **easy to place**, fully oriented, 100% virgin homopolymer polypropylene fibrous reinforcement. FORTA® CAST-MASTER® is a fiber **specifically designed and engineered** by FORTA® for the precast industry. It is used to reduce plastic and hardened concrete shrinkage, improve impact strength, **reduce handling stresses**, and increase fatigue resistance and **concrete toughness**. This extra heavy-duty fiber offers optimum bonding power, maximum long term durability, sharper edge control and quick and uniform fiber distribution by incorporating a unique twisted-bundle fiber technology with a fibrillated pattern and long length fiber option. **Non-corrosive**, chemically inert, and **100% Alkali Proof!**

### APPLICATIONS

FORTA® CAST-MASTER® can **improve every precast product** and is compatible with all precast production manufacturing technologies. It is used to reduce slumping, cracking, and fallouts during precast stripping procedures – **it increases production**. FORTA® CAST-MASTER® meets all A.S.T.M. C-1116 requirements, and is safe to use. **Requires No Mix Design or Placement Changes!**

### INSTALLATION

Recommended dosage rate of FORTA® CAST-MASTER® is **1.6 lbs. per cubic yard (1.0 kg. per cubic meter)** of concrete 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 Homopolymer Polypropylene	Color.....	White
Form.....	Collated Fibrillated Twisted Bundle Fiber	Acid/Alkali Resistance....	Excellent
Specific Gravity.....	0.91	Absorption .....	Nil
Tensile Strength.....	83-96 ksi. (570-660 MPa)	Compliance.....	A.S.T.M. C-1116
Length.....	3/4" (19mm), 1-1/2" (38mm)		
.....	2-1/4" (54mm), and 2-1/2" (60mm)		

### AVAILABILITY

FORTA® CAST-MASTER® can be purchased from FORTA Corporation or an authorized FORTA® products distributor, dealer or representative. Orders are shipped within 24 hours by small package services, commercial carrier, or air freight.

### PACKAGING

	DOMESTIC	INTERNATIONAL
Bags.....	1.6 Pounds	1.0 kg.
Cartons.....	18 Bags	16 Bags
Pallets.....	16 Cartons/288 Bags	12 Cartons/192 Bags

### WARRANTY

FORTA® products are warranted to be free of defects in material and meet all quality control standards set by the manufacturer. FORTA Corporation specifically disclaims all other warranties, express or implied. The exclusive remedy for defective product shall be to replace the product or refund the purchase price. No agent or employee of this company is authorized to vary the terms of this warranty notice. FORTA Corporation has no control over the design, production, placement, or testing of the concrete products in which FORTA® products are incorporated, and therefore FORTA Corporation disclaims liability for the end product.

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 – **C**onfiguration, **C**hemistry, **C**ontents, and **C**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 initial set, and to reduce hardened concrete shrinkage cracking, improve impact strength, and enhance concrete toughness as an alternate secondary/temperature reinforcement.

### **DIVISION – CONCRETE**

### **SECTION – CONCRETE REINFORCEMENT**

### **SUB-SECTION – SYNTHETIC FIBROUS REINFORCEMENT – PRECAST**

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 in fibrillated network twisted-bundle form.
2. **Chemistry** – Fiber shall be made of 100% virgin materials in the form of fully-oriented polypropylene.
3. **Contents** – Fiber shall be used at a minimum dosage rate of 1.6 pounds per cubic yard of concrete (1.0 kg. per cubic meter of concrete).
4. **Correct Length** – Fiber Length shall be a minimum of 3/4" (19mm). Longer length fibers shall be used based on the top-size of the mix coarse aggregate (per A.S.T.M. C-33) as follows:

<b>Aggregate Top Size</b>	<b>Fiber Length</b>
1/4" (6mm)	3/4" (19mm)
1/2" (13mm)	1-1/2" (38mm)
3/4" (19mm)	2-1/4" (54mm)
1" + (25mm+)	2-1/2" (60mm)

**Compliance:** Fibers shall comply with A.S.T.M. C-1116 "Standard Specification for Fiber Reinforced Concrete and Shotcrete" and applicable national building code. The approved product is FORTA<sup>®</sup> CAST-MASTER<sup>®</sup> 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.

## **FORTA Corporation**

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