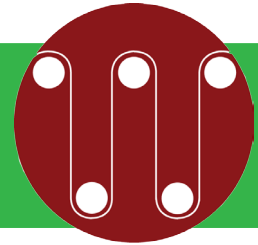




Monofilament Microsynthetic Fiber

# SPECIFICATION DATA SHEET



## DESCRIPTION

**MONO-TUF®** is a monofilament polypropylene fiber manufactured by ABC from 100% virgin homopolymer polypropylene resins. **MONO-TUF®** conforms to the requirements of ASTM C1116, Section 4.1.3 and Note 2 as well as meeting the requirements of ICC ES AC32 Sections 3.1.1 (plastic shrinkage reinforcement) and 3.1.2 (temperature-shrinkage reinforcement).

**MONO-TUF®** is listed in ICC ESR-1699.

**MONO-TUF®** exhibits excellent dispersion throughout the concrete matrix which delivers a superior slab finish, perfect for all residential applications.

## PHYSICAL PROPERTIES

<b>Specific Gravity</b>	<b>0.91</b>
<b>Diameter</b>	<b>15 dpf (48 microns)</b>
<b>Melt Point</b>	<b>320°F (160°C)</b>
<b>Water Absorption</b>	<b>Nil</b>
<b>Acid and Alkali Resistance</b>	<b>Excellent</b>
<b>Modulus of Elasticity</b>	<b>300 ksi</b>
<b>Tensile Strength</b>	<b>25 ksi (min)</b>
<b>Tenacity</b>	<b>4 grams/den</b>
<b>Standard Fiber Lengths</b>	<b>1/4" (6mm), 1/2" (12mm), 3/4" (19mm)</b>

## GENERAL

**MONO-TUF®** monofilament polypropylene fibers are used primarily as plastic shrinkage reinforcement in concrete. Typically introduced at 1.0-pcy, **MONO-TUF®** is an excellent plastic shrinkage reinforcement, and measurably reduces plastic settlement.

**MONO-TUF®** is packaged in pre-weighed degradable bags to ensure optimum dosing and homogeneous distribution of the product. Typically, no modifications to the mix design are required when the product is used at 1.0-pcy and standard mixing and finishing practices control. The **MONO-TUF®** fibers can be introduced into the mixer at any time except when the cement is being introduced. Mixing time will vary based on when the fibers are introduced to the mixer. The normal range is 3-5 minutes with the higher number preferred when the fibers are added after the standard ingredients have been introduced and mixed.

**MONO-TUF®** is not a replacement for structural steel. It will not replace any of the steel that is used in calculating the load carrying capacity of the concrete element.

## APPLICATIONS

- Sidewalks
- Decks
- Patios
- Residential Driveways
- Pool Decks
- Extruded Curbs and Gutter
- Basement and Garage Floors
- Stucco

## FEATURES & BENEFITS

- Excellent Distribution
- Excellent finishability
- Modifies macro-micro cracking mechanism
- Reduces plastic settlement
- Extends service life with reduced maintenance
- Enhances impact and surface abrasion resistance

## ENGINEERING SPECIFICATIONS:

MONO-TUF® is engineered specifically to perform as a plastic shrinkage concrete reinforcement at the 1.0-psy dosage level. Data also shows that MONO-TUF® may be used as secondary reinforcement. MONO-TUF® is compatible with admixtures and additives that meet the appropriate ASTM specifications.

MONO-TUF® meets the requirements of ASTM C1116, Section 4.1.3 and Note 2 as well as ICC ES AC32 Sections 3.1.1 and 3.1.2 and shall be introduced at the rate of 1.0-psy.



Contact us with any questions regarding this product. If a Letter of Certification for MONO-TUF® is needed to show compliance with the specifications referenced above, or for specific project requirements, please contact us for that as well.

## ICC ES AC32 ENGINEERING PROPERTIES

Test	Control	Mono-Tuf	% of Control	ICC Criteria	
Compressive Strength, psi	5,470.0	5,580.0	102.0%	≥ Control	
Flexural Strength, psi	530.0	620.0	116.9%	≥ Control	
Freeze/Thaw Durability	65.7	77.7	118.3%	≥ Control	
Bond Strength, psi	1,240.0	1,330.0	107.3%	≥ Control	
Plastic Shrinkage Cracking	87.6% (reduction)		Min. 40%		
Impact Resistance					
7days, blows		3	7	233%	Min. 200%
28 days, blows		6	11	183%	Min. 150%

## PACKAGING AND SHIPPING

We strive to meet our customers’ needs and specifications by shipping our fiber in an inexpensive and timely manner, and by packaging our fiber in infinite ways. We ship within 48-hours of purchase order receipt for less than truckload orders. We can package into bags as small as 0.50-lb. and as large as 30-lbs. Our pallets range in weight from 648-lbs. to 1080-lbs. We remember that we are here because of our customers, and strive to keep them happy!

### WARRANTY AND LIMITATION OF LIABILITY

As used herein, the term “ABC” shall refer to ABC Polymer Industries, LLC and its subsidiaries.

The terms of ABC’s invoices shall be governed by and construed in accordance with the laws of the State of Alabama.

ABC’s fibers are intended to reduce plastic shrinkage cracking and provide secondary temperature-shrinkage reinforcement. ABC’s fibers should not be used as structural reinforcement. ABC Polymer Industries, LLC warrants that the product sold hereunder is of merchantable quality and conforms to the seller’s standards and specifications. The seller’s sole liability for claim shall be limited to replacement of defective or non-conforming product. In no event shall the seller be liable for any special, incidental, consequential, or exemplary damages. ABC Polymer Industries, LLC recommends that each user determine the suitability of the product(s) for their particular application.

ABC engineering and sales personnel are available to assist in selecting the appropriate fiber for a given specification / application. Said personnel will provide an overview of anticipated performance based upon experience and testing data. ABC personnel will provide recommendations, but are not the final arbiters on design. ABC personnel will provide onsite support where our products are utilized and when deemed necessary, but will not participate in the supervision of any project. ABC’s responsibility is to support our customers and to provide our customers with the best materials and assistance in marketing these products.

(C) 2011 ABC Polymer Industries, LLC