



PHYSICAL PROPERTIES

Micro - 100% Virgin polypropylene

Absorption: Nil

Specific Gravity: 0.91

Alkali Resistance: Excellent

Melting Point: 320° F (160° C)

Electrical conductivity: Low

UV Resistance: Excellent

Modulus of Elasticity: 400 KSI

Denier: 3

Standard Lengths: ½" (12mm),
¾" (19mm)

DESCRIPTION

MONO-PROTM is a unique, high tensile strength, high modulus of elasticity, ultra-thin monofilament fiber manufactured by ABC Polymer Industries from 100% virgin homopolymer polypropylene resins. **MONO-PRO**TM 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 is listed in ICC ESR-1699.

MONO-PROTM monofilament fibers are used primarily as plastic shrinkage reinforcement in concrete. There are approximately 100 million individual ¾" long fibers in a half-pound of product. Because of the high fiber count, a half-pound of **MONO-PRO**TM fibers is capable of reducing plastic shrinkage and plastic settlement cracking more than conventional monofilament fibers at a 1.0 lb dosage. At the engineered dosage of 0.5 lbs per cubic yard of concrete, **MONO-PRO**TM offers stellar plastic shrinkage reinforcement while also offering excellent distribution and finishability as well as extending service life by enhancing impact and surface abrasion resistance.

APPLICATIONS

- Residential and commercial slabs-on-ground
- Decks and patios
- Water retention tanks
- Pool decks
- Stucco
- Dry packaged cement based products
- Precast products
- Tunnel Linings

ADVANTAGES

- Uniform distribution throughout the concrete mix
- Excellent finishability
- Excellent reduction in plastic shrinkage and plastic settlement cracking
- Measurably reduces permeability, thus increasing freeze-thaw durability
- Increases concrete durability including impact and abrasion resistance and fatigue strength
- Delivered to the site in ready mix truck

ENGINEERING SPECIFICATIONS

MONO-PROTM is uniquely developed plastic shrinkage reinforcement for concrete. With approximately 100 million, 0.75" long fibers in the engineered dose of 0.50 pcy, **MONO-PRO**TM is capable of actually reducing plastic shrinkage cracking by up to 25% more than conventional monofilament fibers at 1.0 pcy dosage rates. **MONO-PRO**TM is compatible with admixtures and additives that meet the applicable ASTM specifications.

MONO-PROTM meets the requirements of ASTM C1116, Section 4.1.3 and Note 2. **MONO-PRO**TM is listed in ICC ES Evaluation Report ESR-1699 at 0.5 pcy as a plastic shrinkage cracking reinforcement per section 3.1.1 of AC32.



ICC ES AC32 ENGINEERING PROPERTIES

Test	Control	Mono-Pro	% of Control	ICC Criteria
Compressive Strength, psi	5,090	5,520	110.5	≥ Control
Flexural Strength, psi	570	630	108.4	≥ Control
Freeze/Thaw Durability	89.5	92.5	103.6	≥ Control
Bond Strength, psi	16,164	20,151	124.6	≥ Control
Plastic Shrinkage Cracking		62.6% reduction	Min 40%	

GENERAL SPECIFICATIONS

MONO-PRO[™] fibers should be added per project specifications or engineer's instructions. **MONO-PRO**[™] fibers are typically introduced at 0.5 lbs. per cubic yard of concrete and are packaged in pre-measured degradable bags that can be added directly to the mix. These fibers are not intended to replace primary, structural steel in concrete. For Dosage rates outside the typical range, please contact your local ABC Polymer Fiber Representative – ABC Engineering contacts are: Bobby Zellers (724-475-1177) & Ellyn Veal (615-275-8115).

INSTRUCTIONS FOR USE

Typically, no modifications are required when **MONO-PRO**[™] is used at 0.5 lbs per cubic yard, and standard mixing and finishing practices can be employed. **MONO-PRO**[™] fibers may be added to the concrete at any time before, during, or after the batching process with a single exception ... bags may not be added at the same time as the cement. A minimal increase in mixing time may be needed to ensure complete dispersion of the fibers. The normal range is 3-5 minutes with the higher mixing time preferred when the fibers are added after the standard ingredients have been introduced and mixed. Follow ASTM C-94, "Standard Specifications for Ready-Mixed Concrete" in assembling a homogeneous mix. Please contact ABC Polymer if a Letter of Certification for **MONO-PRO**[™] is needed to show compliance with the specifications referenced above or specific project requirements.

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

"ABC" shall refer to ABC Polymer Industries, LLC and its subsidiaries.

ABC's fibers are intended to reduce plastic shrinkage cracking and provide secondary temperature-shrinkage reinforcement along with post first crack improvement. 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. ABC's liability for claims under this warranty shall be limited to replacement of defective or non-conforming product. Any claims that result from an abuse of the product, misuse of the product, not using the product for its intended purpose or Acts of God are not covered. In no event shall ABC be liable for any special, incidental, consequential, or exemplary damages. ABC recommends that each user determine the suitability of the product(s) for their particular application.

ABC is available to assist in selecting the appropriate fiber for a given specification / application. ABC will provide an overview of anticipated performance and recommendations, based upon experience and testing data obtained from university and third party laboratories. However, customers should consult engineering or design professionals, in evaluating ABC's recommendations. ABC 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.

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