



MICRO SYNTHETIC

Description

FORTA® ULTRA-NET® is an easy to finish, color-blended micro synthetic fiber, made of 100% virgin homopolymer polypropylene in a unique twisted bundle, collated fibrillated form. This extra heavy-duty fiber offers ULTRA-NETWORKING power, maximum long-term durability, and temperature/shrinkage control by incorporating a fibrillated pattern and long length option. ULTRA-NET is non-corrosive, non-magnetic, and 100% acid and alkali proof.

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 temperature/shrinkage reinforcement.

Physical Properties

Specific Gravity	0.91
Tensile Strength	83-96 ksi (570-660 MPa)
Length	2.5 in (60 mm), 2.25 in (54 mm), 1.5 in (38 mm), 0.75 in (19 mm)
Melting Point	319°F (160°C)
Material	Virgin Homopolymer Polypropylene
Form	Fibrillated Twisted Bundle
Color	Tan
Acid / Alkali Resistance	Excellent
Absorption	Nil

Compliance & Certification

- ASTM C1116 / C1116M-10a, Standard Specification for Fiber-Reinforced Concrete, "Type III Synthetic Fiber-Reinforced Concrete"
- ASTM D7508 / D7508M-10(2015), Standard Specification for Polyolefin Chopped Strands for Use in Concrete
- Evaluated by ICC-ES, see Evaluation Report No. ESR-2720
- UL Listed: CBXQ.R18552 and CBXQ7.R18552
- DUNS: 094214129
- CAGE Code: 0AFN8
- NAICS: 325220



Applications

ULTRA-NET is used in performance concrete applications such as slabs-on-ground, shotcrete, tilt-up panels, architectural/colored concrete, and precast – anywhere that optimum fiber performance is required and where the objective is to control temperature/shrinkage and settlement cracking while improving long-term durability properties. Requires no mix design or placement changes!

Performance Benefits

- Enhance durability
- Reduce plastic and hardened concrete shrinkage
- Reduce settlement cracking
- Provide nominal impact strength
- Increase post-cracking residual strength
- Increase concrete toughness
- Provide 3-dimensional reinforcement against micro-cracking

Recommended Dosage

This product is typically used at a minimum dosage rate of 1.6 lb/cu yd (1.0 kg/cu m) of concrete. Contact FORTA for design assistance and dosage recommendations for alternate dosage rates used in specialty applications.

Packaging

	Domestic	International
Bags	1.6 lb	1.0 kg
Cartons	18 bags	16 bags
Pallets	16 cartons/288 bags	12 cartons/192 bags

Recommendations

Addition: ULTRA-NET is packaged in mixer-ready bags that can be added directly into the concrete mixing system. The fiber should be added during or after batching of the other ingredients – never as the first mix ingredient.

Mixing: When possible, add fibers to a rotating drum. Once all fibers have been added to the batch, mix four to five minutes at standard mixing speed. Road-revolution speed should not be counted as part of the required fiber mixing time.

Slump: Fibers may reduce the visual slump measured by the slump-cone test, but has a lesser effect on flow-ability and workability. To regain any loss of workability or slump, the use of appropriate admixtures is recommended – avoid the addition of water.

Pumping: If the fiber reinforced concrete is to be pumped, it is HIGHLY recommended that the grate on the hopper of the pump truck be a round-bar grate. The use of a vibrator attached directly to the grate is also recommended to aid in movement of the concrete through the grate.

Additional Information

Additional information such as the Safety Data Sheet, Certifications, videos and other literature can be found on the forta-ferro.com website. The website also features Project Profiles that show the many applications and benefits of FORTA products first-hand.

Limited Warranty

FORTA® Products are warranted to be free of defects in material and will meet all published physical properties as set forth herein. EXCEPT FOR THE EXPRESS LIMITED WARRANTY SET FORTH HEREIN, NEITHER FORTA NOR ANY PERSON ON FORTA'S BEHALF HAS MADE OR MAKES ANY EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY WHATSOEVER, EITHER ORAL OR WRITTEN, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, OR NON-INFRINGEMENT, WHETHER ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED.

The exclusive remedy for defective product is outlined in FORTA's Standard Terms and Conditions of Sale, available upon request. CONSEQUENTIAL DAMAGES ARE SPECIFICALLY EXCLUDED.

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