FRP Products

FORTA® Green-Net®

Green-Net® is a fibrillated net-shaped fiber made of 100% recycled polypropylene, generally used at a dosage of 1.5 lbs/cu yd to improve temperature and shrinkage crack control and contribute to fresh pervious concrete stability.

FORTA® FERRO-GREEN®

FERRO-GREEN® is a high-performance blend of synthetic copolymer macro fibers and a small percentage of recycled polypropylene network fibers, used in dosages of 2.5 to 7.5 lbs/cu yd to dramatically improve pervious concrete strength and toughness, reduce raveling and abrasion losses, and increase resistance to freeze-thaw conditions.

FORTA®

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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.

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FORTA®

FRP - Fiber Reinforced Pervious

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Overview

Pervious concrete has been used in many countries for many years, and is now becoming more than just an oddity in the United States. The impetus behind this surge in application is a growing need to take full advantage of shrinking building sites, and to accommodate storm-water runoff in the process. Though pervious concrete has proven to be a valuable construction material and technique, the historic soft spot has been a question of long-term durability. Experts in the art of pervious materials and practice have long sought ways to improve the material's durability and to add to the long-term comfort level of owners that choose it and architects that specify it.

Laboratory research and project use have shown that synthetic fibers can answer this durability question, by reducing surface raveling and abrasion, increasing freeze/thaw resistance, and improving the overall toughness of pervious concrete pavements. As an integral, non-corrosive, three-dimensional reinforcement, synthetic fibers represent the best opportunity to enhance the performance of pervious concrete and allow its use with confidence in the future.

FRP Projects

GRTA Park & Ride, Newnan, GA

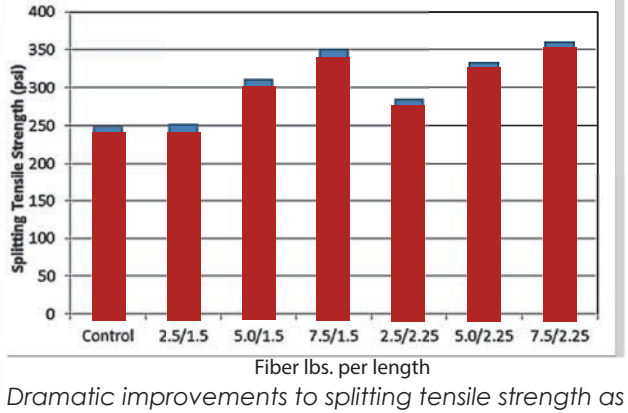
The Georgia Regional Transit Authority selected fiber-reinforced pervious concrete in November 2010 for 30,000 square feet of car-park lot for the Commuter Park & Ride facility in Newnan, GA. FORTA® Green-Net® 1 ½" long fiber was used at 1.5 lbs/cy to add crack-control and early stability to this high traffic 6 in. thick pavement.

Georgia Association of Water Professionals, Marietta, GA

6 in. thick fiber-reinforced pervious pavement replaced over 1,500 sq. ft. of deteriorated asphalt parking lot for the Georgia Association of Water Professionals headquarters in Marietta, GA, in this February 2011 project. The light-duty parking space areas used 1.5 lbs/cy of Green-Net® recycled micro fibrillated fiber, and the medium-to-heavy duty driving areas used 7.5 lbs/cy of the FERRO-GREEN® macro fiber blend for added toughness and durability.

FRP Research

Led by Dr. John T. Kevern P.E., Associate Professor of Civil Engineering, at the University of Missouri at Kansas City performed an extensive 1-year durability research program in 2012 "Investigating the Durability of Pervious Concrete Reinforced with FORTA® FERRO-GREEN® Macro Fibers". Tested at 3 dosages of 2 fiber lengths, FERRO-GREEN® showed dramatic improvements to many durability areas, such as surface abrasion, raveling, tensile strength, and freeze-thaw resistance.



Dramatic improvements to splitting tensile strength as fiber dosage and length were increased.

Control mix showed complete loss of integrity at 187 freeze-thaw cycles.

2 ¼" fiber at 7.5 lbs/cy retained almost complete integrity at 300 freeze-thaw cycles.