LEGACY REPORT

NER-414

Reissued June 1, 2007

ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

Legacy report on the 2000 *International Building Code*® the *2002 Accumulative Supplement to the International Codes*™, the BOCA® *National Building Code*/1999, the 1999 *Standard Building Code*©, the 1997 *Uniform Building Code*™, the 2000 *International Residential Code*® and the 1998 *International One- and Two- Family Dwelling Code*®

DIVISION 03—CONCRETE
Section 03240—Fibrous Reinforcing

PROPEX CONCRETE SYSTEMS CORPORATION
6025 LEE HIGHWAY, SUITE 425
POST OFFICE BOX 22788
CHATTANOOGA, TENNESSEE 37422
423-553-2625
www.propexinc.com

1.0 SUBJECT

1.1 Fibermesh® 150 Fibers

1.2 Blended Fibermesh 150 e3® Fibers

2.0 PROPERTIES FOR WHICH EVALUATION IS SOUGHT

2.1 Reduction of plastic shrinkage cracking in plain concrete.

2.2 Reduction of shrinkage and temperature cracking in plain concrete slabs on grade.

3.0 DESCRIPTION

Fibermesh® 150 Fibers are extruded from polypropylene olefin resin and collated in small bundles that distribute upon mixing when added to a concrete mix. The fibers are $^1/_2$ and $^3/_4$ inch in length and used to inhibit plastic shrinkage cracking of concrete.

Blended Fibermesh 150 e3® Fibers are a blend of the $^1/_2$ inch and $^3/_4$ inch length Fibermesh® 150 Fibers.

The fibers are used in plain concrete for inhibiting plastic shrinkage cracking and in plain concrete slabs on grade for reduction of shrinkage and temperature cracking. Proper location and spacing of control joints are required in accordance with the applicable Code.

Structural plain concrete is defined in Section 22 of ACI 318-95 and -99. Use of the fibers shall not reduce the requirements for contraction or isolation joints. Contraction or isolation joints shall be provided in accordance with Section 22.3 of ACI 318-95 and -99.

4.0 INSTALLATION

Fibermesh® 150 and Blended Fibermesh 150 e3® Fibers shall be dispersed uniformly through the concrete mixture according to ASTM C 1116.

The fibers are used at a minimum of $^3/_4$ pound per cubic yard of concrete. Fibers are introduced into the mixer before, during or after the charging operation—at the plant or in the truck mixer at the jobsite. The fibers shall be uniformly distributed throughout the concrete after mixing at rated time and speed. Over-mixing will not alter its performance.

The manufacturer's published installation instructions and this report shall be strictly adhered to and a copy of these instructions shall be available at all times on the job site during installation.

The instructions within this report govern if there are any conflicts between the manufacturer's instructions and this report.

5.0 IDENTIFICATION

Each container of Fibermesh® 150 and Blended Fibermesh 150 e3® Fibers are identified with the manufacturer's name and/or trademark, address and telephone number, product trade name, dosage rate, use instructions and this ICC-ES legacy evaluation report number NER-414 for field identification.

6.0 EVIDENCE SUBMITTED

6.1 Manufacturer's descriptive literature and product specifications.

6.2 Test reports of Concrete Properties, prepared by H. H. Holmes Testing Laboratories, Inc., Lab. No. CH 2962, File No. 6698.2, dated May 29, 1987, signed by Glenn O. Schumacher and Richard E. Nelson.

6.3 Test report on Crack Comparison, STEALTH® Fibers vs. Plain Concrete, prepared by Paul P. Kraai, P.E., Report No. K027-061786, dated June 17, 1986, signed by Paul P. Kraai, P.E.

6.4 Test report on Freeze-thaw Durability in accordance with ASTM C 666, Procedure A, prepared by Wiss, Janney, Elstner Associates, Inc., Report No. WJE No. 885014, dated May 12, 1988, signed by J. Robert Landgren.

6.5 Letter report on field exposure test of slabs on grade subjected to two winters of freezing and thawing, prepared by CLM Engineering Associates, Inc., dated June 7, 1988, signed by C. Lee Mason, P.E.

6.6 Alkaline solution exposure test prepared by Synthetic Industries, dated March 16, 1988, signed by O.Z.Tyler.

6.7 Engineering analysis, evaluation of Blended Stealth® e3™ fibers, blend of $^{1}/_{2}$ inch and $^{3}/_{4}$ inch fibers, Krazan & Associates, Inc., KA Project No. 096-02069, December 19, 2002, signed and sealed by Timothy G. Beckerle, P.E.

7.0 CONDITIONS OF USE

The ICC-ES Evaluation Subcommittee for the National Evaluation Service finds that Fibermesh® 150 and Blended Fibermesh 150 e3® Fibers as described in this report complies with or are suitable alternates to that described in the 2000 *International Building Code*® the *2002 Accumulative Supplement to the International Codes*™, the BOCA® *National Building Code*/1999, the 1999 *Standard Building Code*©, the 1997 *Uniform Building Code*™, the 2000 *International Residential Code*® and the 1998 *International One- and Two- Family Dwelling Code*® subject to the following conditions:

7.1 Fibers shall not be used as a replacement for any reinforcement required for structural purposes.

7.2 Structural design of the concrete shall comply with the applicable building Code.

7.3 Fibers shall be blended into the concrete mix in accordance with Section 4.0 of this report.

7.4 Contraction or isolation joints shall be provided in accordance with Section 22.3 of ACI 318-95 and -99.

7.5 The scope of this evaluation is limited to the properties stated in Section 2.0 of this report.

7.6 The fibers shall be used only in normal-weight plain concrete.

7.7 This report is subject to periodic re-examination. For information on the current status of this report, contact the ICC-ES.