

# ICC-ES Evaluation Report

**ESR-1726**

Reissued June 1, 2009

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**DIVISION: 03—CONCRETE**  
**Section: 03240—Fibrous Reinforcing****REPORT HOLDER:****IRVING MATERIALS INC.**  
**1816 WEST LLOYD EXPRESSWAY**  
**EVANSVILLE, INDIANA 47712**  
[www.irvmat.com](http://www.irvmat.com)**EVALUATION SUBJECT:****IMIX XS STEEL FIBERS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

**Properties evaluated:**

- Durability
- Ability to minimize cracking in concrete

**2.0 USES**

The imix XS steel fibers are used to minimize shrinkage and temperature cracking of structural plain normal-weight concrete footings and structural plain normal-weight concrete slabs supported directly on the ground. The fibers must not be used to replace any structural reinforcement, or the joints specified in IBC Section 1909.3 and Section 22.3 of ACI 318.

**3.0 DESCRIPTION**

The imix XS steel fibers are manufactured from nonalloy steel rods complying with BS EN 10016-2, Grade C9D, Number 1.0304. The fibers are cold-drawn, deformed wire fibers complying with ASTM A 820, Type I. The fibers have a nominal diameter of 0.035 inch (0.90 mm), are 2.4 inches (60 mm) long, and are either loose or glued together in strips. The fibers are packaged in 44-pound (20 kg), non-water-soluble bags.

**4.0 INSTALLATION**

The fibers must be blended into the concrete mix at a nominal dosage rate of 10 pounds per cubic yard (5.9 kg/m<sup>3</sup>) of concrete, and the concrete with steel fibers must

comply with ASTM C 1116, Type I. The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the manufacturer's published installation instructions must be available at all times on the jobsite during installation.

**5.0 CONDITIONS OF USE**

The imix XS steel fibers described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The fibers must be blended into the concrete mix in accordance with Section 4.0 of this report and the manufacturer's published installation instructions. If there is a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2** The fibers must not be used to replace any structural reinforcement or the joints specified in IBC Section 1909.3 and Section 22.3 of ACI 318.
- 5.3** Structural design of the concrete must comply with the applicable code.
- 5.4** Use of fibers must be approved by a registered design professional.
- 5.5** A batch or delivery ticket, signed by the weigh master, must be available to the code official upon request. The delivery ticket must include, in addition to the items noted in Section 13.1 of ASTM C 94, the type, brand and amount of fibers added to the concrete mix, as well as language indicating compliance of the concrete with steel fibers with ASTM C 1116, Type I.

**6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Steel Fibers in Concrete (AC208), dated October 2005, including reports of freezing and thawing durability testing.

**7.0 IDENTIFICATION**

Labels on the non-water-soluble bags bear the company name (Irving Materials, Inc.) and address, the product name, "imix XS" and the evaluation report number (ESR-1726).