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**DIVISION: 03—CONCRETE**

Section: 03240—Fibrous Reinforcing

**REPORT HOLDER:**

**W. R. GRACE & CO. (CONN)—GRACE  
CONSTRUCTION PRODUCTS**  
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**EVALUATION SUBJECT:****GRACE MONOFILAMENT FIBERS™****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2000 *International Building Code*®(IBC)
- 1997 *Uniform Building Code*™ (UBC)

**Properties evaluated:**

Grace Monofilament Fibers™ are synthetic fibers used as an admixture for normal-weight concrete, to aid in controlling plastic shrinkage cracking in structural plain concrete slabs on grade.

**2.0 USES**

The fibers are used as an admixture for normal-weight concrete, to aid in controlling plastic shrinkage cracking of structural plain concrete slabs that transmit vertical loads from other parts of the structure to the soil.

**3.0 DESCRIPTION**

Grace Monofilament Fibers are 100 percent polypropylene fibers. The fibers are 6.5 denier and  $\frac{3}{4}$  inch (19.1 mm) long, and are furnished in water-soluble, 1-pound (0.45 kg) bags. The fibers are added to normal-weight concrete mixtures along with aggregate at a rate of 1 pound per cubic yard (0.59 kg/m<sup>3</sup>) and are mixed.

**4.0 INSTALLATION**

Fibers are added to normal-weight concrete mixtures along with the aggregate during concrete batching, and are mixed in the batch for at least five minutes or 70 revolutions. Fibers can also be added to mixed concrete and then mixed for five minutes or 70 revolutions. The fiber concrete is finished and cured in accordance with standard practice.

**5.0 CONDITIONS OF USE**

The Grace Monofilament Fibers™ described in this report comply with those codes noted in Section 1.0 of this report, subject to the following conditions:

- 5.1** The fibers are not used as a replacement for any reinforcement required for structural purposes.
- 5.2** Structural design of the concrete complies with the applicable code.
- 5.3** Application and mixing comply with this report and the manufacturer's instructions.
- 5.4** Contraction or isolation joints are provided in accordance with Section 1922.3 of the UBC, which references Section 22.3 of ACI 318-95; and Section 1909.3 of the IBC, which references Section 22.3 of ACI 318-99.
- 5.5** Use of fibers is approved by the project engineer or architect, if there is one.
- 5.6** A delivery ticket, signed by the weigh master, is available to the building official upon request. The delivery ticket must include, in addition to the items noted in Section 13.1 of ASTM C 94-98 (IBC) or Section 16.1 of ASTM C 94 (UBC), the type and amount of fibers added to the concrete mix.

**6.0 EVIDENCE SUBMITTED**

- 6.1** Data in accordance with the ICC-ES Interim Criteria for Concrete with Synthetic Fibers (AC32), dated April 1999.
- 6.2** Installation instructions.
- 6.3** A quality control manual.

**7.0 IDENTIFICATION**

The fibers are packaged in water-soluble paper bags shipped in cartons. Labels on the bags and cartons bear the company name of W.R. Grace & Co., the product name (Grace Monofilament Fibers™), and the evaluation report number (ESR-1052).