

# Concrete/Shotcrete Construction

## Concrete Slabs-On-Ground

## Concrete Slabs-On-Composite Steel Deck

## Wet Method Shotcrete

## Dry Method Shotcrete

## Secondary Reinforcement

### Section 3240: Nylon Fibers As Secondary Reinforcement

**Definition:** Secondary Reinforcement The definition for secondary/temperature-shrinkage reinforcement per ACI 116 is: That reinforcement specified to hold the concrete together after it cracks. Said reinforcement is not used in the structural design of the cross-section of the concrete element.

For the purpose of this specification nylon fibers meet the general definition of synthetic fibers when used as secondary reinforcement in concrete. Nylon fibers are man-made fibers from the petrochemical group processed with textile industry equipment.

The nylon fibers specified shall conform to the requirements of ASTM C1116, Section 4.1.3 and Note 3, as well as ICBO ES Acceptance Criteria 32, Sections 4.1.1 and 4.1.2. Both of these specifications apply to the use of nylon fibers as secondary reinforcement in concrete. At the request of the project engineer the synthetic fiber vendor shall furnish a Letter of Certification stating compliance with these specifications and signed by a registered Professional Engineer.

The nylon fibers shall be multifilament fibers made from virgin nylon resins.

Nylon multifilament fibers shall be introduced at the rate of 1.0 pound per cubic yard (0.6 kilograms per cubic meter) or as specified at the standard length of ¾" (19mm) or as specified.

Nylon fibers shall be added at the concrete batch plant and mixed with the other ingredients for 3 to 5 minutes. The concrete producer shall list the type and quantity of synthetic fiber added on each delivery ticket.

The ready-mix producer of record shall provide the project concrete contractor and project manager with a set of literature for the nylon fiber to be furnished.

A source complying with this specification:

Manufacturer: Nycon, Inc, 101 Cross Street, Westerly, RI 02891  
Phone: 800 456 9266  
Product Names: NyconRC and MultiMesh, which are nylon multifilament fibers  
Website: [www.nycon.com](http://www.nycon.com)

Technical questions should be directed to Nycon, Inc.