

## Technical Data Sheet

### POLYPROPYLENE FIBERS 50µm Monofilament Product Code Prefix: PPSTM-050NRR

**General Description:** Polypropylene is a manufactured fiber in which the fiber-forming substance is a long-chain synthetic polymer composed of at least 85% by weight of propylene units. This 50µm monofilament is a very fine fiber that is specially suited to reduce shrinkage and prevent crack formation in cementitious materials.

**Standard Filament Size:** 50µm

**Standard Cut Lengths:** 3mm, 6mm, 12mm, 18mm

**Tensile Strength:** ≥152 MPa

**Elastic Modulus:** ≥1.1 GPa

**Specific Gravity:** 0.91 g/cm<sup>3</sup>

**Average Moisture Absorption:** <0.1%

**Effects of Heat:** Softens at ~160°C /~320°F. Melts at ~168°C /~335°F.  
Decomposes at ~288°C /~550°F.

In concrete, with the development of intense heat, the fibers will melt and create small capillary cavities, which can delay explosive fragmentation.

**Chemical Resistance:** Good resistance to acids and alkalis. Physically resistant to chemicals in concrete.

**Performance Characteristics:** This fiber is specially treated to reduce air intake in cementitious products, which decreases porosity and improves strength. It has high dispersibility in the matrix, and the fineness of the fibers results in a high fiber frequency and increased surface area. This provides increased tensile strength and helps to evenly distribute early shrinkage tension, thus reducing the formation of cracks and long-term weaknesses in the material. The 50µm product is especially well suited for use in dry mixes.

**Other Characteristics:** One of the lightest of all fibers. Not attacked by microorganisms, mold or mildew. Low thermal conductivity. Very little tendency to acquire static charge.

**Packaging:** Standard packaging is corrugated boxes with polyethylene liners. Other packaging available upon request.

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