

FiberVisions® T-158 - for concrete

FiberVisions® T-158 is a specialized polypropylene fiber, specifically developed to improve cementitious materials.

When FiberVisions® T-158 is added to concrete, the end user can expect the following characteristics:

- Excellent mixability, especially for precast concrete.
- Reduction in plastic, drying shrinkage and settlement cracking.
- Effective permanent bonding with concrete.
- Excellent resistance to alkali, acid and corrosion.
- Improved abrasion, impact and shatter resistance.
- Reduction in permeability.
- Ease of finishing.
- The fibers quickly and easily mix with the concrete and form a three-dimensional reinforcing network.
- T-158 will not rot, rust or deteriorate.

Properties of FiberVisions® T-158

T-158 offers the following benefits in addition to the good qualities of polypropylene fibers:

- Good bonding to all cementitious materials
- Large specific surface area
- Good dispersion ability, requiring less stringent mixing
- High tensile strength

Applications

Cracks are the main reason for long term weakness and failure in concrete and mortar products. During drying shrinkage, stress builds up. This energy causes unreinforced concrete to tend to crack.

With the addition of T-158 fibers, this energy is distributed to millions of fibers and will result in a reduction of plastic and drying shrinkage cracking. FiberVisions® T-158 ensures that the material matures to develop its full potential strength.

The T-158 fiber is used to construct the following structures with improved properties:

- Pavements and paving tiles
- Slabs on grade
- Driveways and parking lots
- Tennis courts
- Roads (parking lots, driveways)
- Coastal protection
- Subterranean walls
- Shotcrete
- Patios
- Curbs and gutters
- Septic tanks
- Laser screed layers
- Precast products

How to use T-158

FiberVisions® T-158 fiber addition will vary according to application and function.

Depending on the application, one cubic yard of concrete containing T-158 can have in excess of 20 million crack resistant and reinforcing fibers.








T-158 fibers used at the recommended addition will reduce the permeability of most concrete.



Typical Properties



**FiberVisions®
T-158 Fibers**

| | Nom. Value | Property | Reference |
|--|----------------------------------|--|---------------------------------|
|  9 km | 7, 15 | Titer (denier per filament) | ASTM D1577 |
|  | > 3.4 | Tenacity (g/denier) | ASTM D3822 |
|  | Adjustable | Elongation at break | ASTM D3822 |
|  | 19 | Fiber length (mm) | ASTM 5332 |
|  | 100% PP 140 - 150°C 162 °C | Raw material Softening point Melting point | As described in ASTM D276 |
|  | Adjustable | Crimp Frequency | ASTM D3937 |
|  | Adjustable | Finish level as weight % | Internal FV test |

*All measurements are conducted under standard atmosphere according to ISO 554 (23°C/50% relative humidity).

Polyolefin fibers consist of 99% carbon and hydrogen. The remaining 1% consists of water and applied spin finish. The fiber bales are protected with polyolefin foil and closed with polyester straps. The product and the packaging materials are suitable for recycling and combustion. Inhouse waste should be kept clean to facilitate direct recycling. In disposal of any waste, ensure that all applicable regulations are met.

Performance profile of polypropylene fibers

FiberVisions® fibers have a number of advantages over other man-made fiber types:

Density. The density of polypropylene is 50% lower than polyester and 25% lower than polyamide. This means that lightweight fabrics can be made with excellent bulk and cover from lower denier yarns than from other fiber types.

Comfortable. Polypropylene is a very comfortable and soft fiber. It has a low modulus which ensures good drapeability, and it has excellent resistance to static build-up.

Insulation. Polypropylene has the lowest conductivity of all textile fibers, and it absorbs no moisture.

Resistance. Polypropylene is inert to acids, alkalis and other chemicals. It is resistant to rot, mildew and bacteria. Polypropylene fiber is highly resistant to abrasion and has a toughness superior to most fibers.

Technical Service. FiberVisions believes in offering extensive technical service to its customers. This includes fiber innovation programs, exclusive fiber development, color matching and fiber quality enhancements.

Request a trial for your next application!



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