

*Fibers for Hygiene*

## **FiberVisions® T-191 Fiber**

Reduce Fabric Weight While Maintaining Critical Nonwoven Properties

FiberVisions has developed cost effective polypropylene (PP) fine fiber in response to the continuing need to make carded thermal bond nonwoven fabrics more cost effective. Finer fibers allow the nonwoven fabric manufacturer to produce lightweight fabrics maintaining fabric strength and fabric coverage while improving fabric uniformity and softness.

For years, the standard carded thermal bond PP fibers have been 1.9 – 2.2 denier/filament (dpf). Finer fibers have always been desired by nonwoven producers and their customers, but higher prices for finer fibers have limited their successful exploitation.

FiberVisions has developed a novel approach to produce cost effective fine fibers for carded thermal bond applications. FiberVisions is now offering T-191 fibers for carded thermal bonding in the 1.2-1.7 dpf range.

FiberVisions T-191 fiber is a development which demonstrates FiberVisions continuing commitment to innovation. Manufacturers of carded, thermal bonded coverstock will experience a fiber with features which ensure a distinctively better, competitive nonwoven product:

- Excellent softness
- Broad bonding window
- Easy to process
- Good liquid transport properties
- Excellent nonwoven properties

The quality of the fibers is assured by highly skilled and qualified operators, an ISO 9001 certified quality assurance system, and very advanced fiber production facilities.

### **Advantages for roll goods manufacturers and converters**

The manufacturers of nonwovens will experience benefits with respect to better processability due to a broad bonding window (up to 15-20°C) and high carding speed (up to 250 m/min.) while obtaining very good nonwoven properties.

For converters, the well-known soft texture of carded, thermal bonded nonwovens is even further enhanced, thus increasing the comfort for the diaper user.

Furthermore, fabrics made from T-191 fiber have better uniformity, drapeability and bulkiness than spunbonded materials.

Nonwovens made from FiberVisions® T-191 fiber can easily be laminated to other materials (e.g. films) due to the broad bonding window.

### **Fine Fibers**

FiberVisions® T-191 fiber is available in titer from 1.2 to 1.7 denier per filament.

Fine fibers can be used to improve the coverage of nonwovens. A 33% reduction in fiber titer (from 2.0 to 1.5 dpf) results in a 75% increase in the number of fibers. This increased number of fibers also results in improved uniformity of the nonwoven. Fine fibers also improve the softness and drapeability of the fabrics.

However, the main benefit of the finer fibers and the dramatic increased number of fibers is the ability to reduce fabric weight while maintaining other critical fabric properties.

Typical Properties



**FiberVisions®**  
**T-191**

	Nom. Value	Property	Reference
 9 km	1.2 - 1.7	Titer (denier per filament)	ASTM D1577
	2.5 - 4.2	Tenacity (g/denier)	ASTM D3822
	80 - 300%	Elongation at break	ASTM D3822
	38, 48	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!



**FiberVisions**  
3700 Crestwood Parkway, Suite 900  
Duluth, Georgia 30096  
Tel.: +1 678 578 7240  
Fax: +1 678 578 7276  
email: sales.hygiene@fibervisions.com

**FiberVisions a/s**  
Engdraget 22  
DK-6800 Varde, Denmark  
Tel.: +45 7994 2200  
Fax: +45 7994 2201  
e-mail: fibervisions@fibervisions.dk

**FiberVisions Textile Products, Ltd.**  
No. 29 Heng Shan Road  
Suzhou, China 215009  
Tel.: +86 512 6823 1099  
Fax: +86 512 6823 0021  
email: sales.suzhou@fibervisions.com

www.fibervisions.com

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