

FiberVisions® HY-Strength (phob)

FiberVisions® HY-Strength has been developed to widen the existing opportunities of carded, thermal bonded nonwovens: To allow the production of much stronger nonwovens than previously seen in the industry.

The new polypropylene staple fiber, FiberVisions® HY-Strength is second to none with regard to

- **Strength:** The CD strength reaches unseen levels compared to other PP fibers
- **Speed:** Carding lines are easily able to run at a steady speed of 250 m/min. or more.
- **Bondability:**
 - Broad bonding window
 - Low bonding temperature

FiberVisions® HY-Strength also has the advantages of any Fibervisions longspinning fiber:

- The fiber adds softness and elongation properties to the nonwoven. Comparable with other FiberVisions® fiber types
- The fiber is available in a hydrophilic as well as a hydrophobic version.
- A controlled surface characteristic ensures optimal bonding conditions.
- The uniformity of the fibers ensures stable processing conditions, minimizing down time and downgraded materials.
- The FiberVisions concept of adapting the fiber to suit the individual carding line maximizes nonwoven tenacities and elongation.

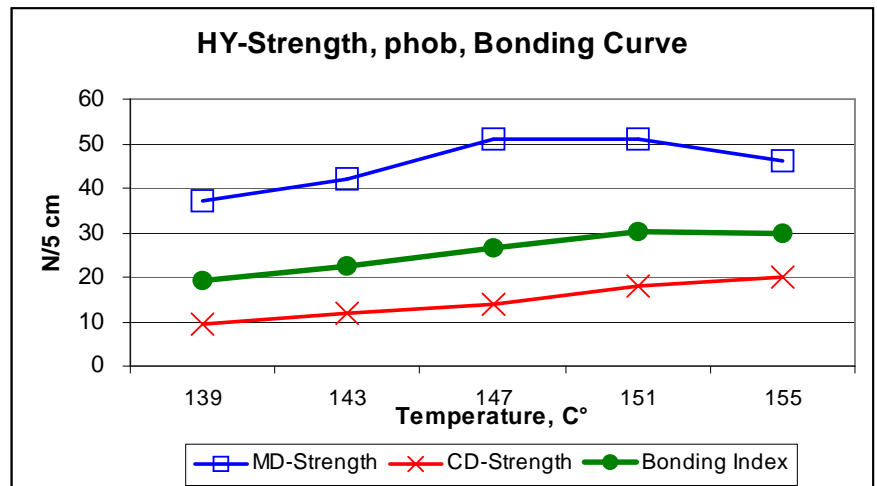
Stronger than Ever

Typical Fiber Data

Dtex:	1.7, 2.2 dtex
Tensile Strength:	1.8 - 2.0 cN/dtex
Elongation:	360 - 400%
Fiber Length:	40 - 60 mm
Crimp Frequency:	75 - 100
Spin Finish Level:	0.35%

Results from FiberVisions a/s Pilot Carding & Calendering Line









FiberVisions has obtained the following nonwovens data from tests on the carding & calendering line at a carding speed of 100 m/min.
(Typical data for a 23 g/m² product):












Compared with nonwovens made of FiberVisions® HY-Dry T, the HY-Strength hydrophobic fiber has clear advantages:

- The fiber provides nonwovens with up to 30% additional strength (especially in the Cross Directional Strength)
- The hydrophobicity (Water Rising Column) is better, due to an improved spin finish system.

Typical Fiber Values and Nonwoven Properties

 FiberVisions® HY-Strength (phob)			
	Nom. Value	Measure	Method
 10km	1.7; 2.2dtex	The weight in grams of a fiber of 10 km	Internal FV test length
	1.8 - 2.0 cN/dtex	Tensile strength of the fiber	Internal FV test
	350 - 400%	Elongation at break	Internal FV test
	40, 50 and 60 mm	Fiber length (under a prescribed load)	Internal FV test
	100% PP 140 - 150°C 162 °C	Raw material: Softening point Melting point (peak)	
 10 cm	Variable	Crimp frequency (KD) no. of crimps/10 cm	Internal FV test
	0.35% or acc. to cust. needs	Spin finish level as weight %	Internal FV test

 Typical Data obtained on FiberVisions Pilot Thermal Bonding Line			
	Nom. Value	Measure	Method
 m ²	All values refer to a 20 g/m ² nonwoven, produced under optimum conditions at 100 m/min.		
	19 - 22	Bonding Index, combining MD and CD tenacities	Formula
	40 - 50 N/5 cm	MD Tensile Strength	Internal FV test
	13 - 18 N/5 cm	CD Tensile Strength	Internal FV test
	50 - 70%	MD Elongation	Internal FV test
	80 - 120%	CD Elongation	Internal FV test
	> 300 sec	Strike Through time	WPS 70.3
	up to 8 cm	Water Rising Column	Internal FV test

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

Polyolefin fibers consist of 99% carbon and hydrogen. The remaining 1% consist 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.

For further information contact your FiberVisions representative.

The FiberVisions® HY-Strength is presently produced at the FiberVisions a/s plant in Denmark
HY-Strength is a trademark of FiberVisions.

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