

# FiberVisions® HY-Repeat

FiberVisions® HY-Repeat fiber is developed to maintain a significant hydrophilic level, even after repeated wettings.

Consequently, the fiber will manage to transport large quantities of liquids to the absorbent cores in baby diapers and sanitary napkins.

Faster strike through and low rewet values are the features to ensure a dry surface of the diaper topsheet for much longer time and increase the comfort feeling of the user.

FiberVisions® HY-Repeat is a fiber with the following advantages:

- **Excellent softness**
- **Broad bonding window (more than 10 °C)**
- **Easy to process**
- **Very good liquid transport properties with minimal rewet**
- **Excellent nonwoven properties**

Manufacturers of carded, thermal bonded coverstock will experience a fiber with features which ensure a better competitive nonwoven product in terms of cardability (up to 200 m/min) and product properties.

Compared with spunbonded materials, carded and thermal bonded nonwovens have better uniformity, softer hand and drapeability and a better bulkiness.

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

## Fine and Coarse Fibers

FiberVisions® HY-Repeat fibers are available in dtex from 1.7 to 6.7 dtex.

The fine fibers in 1.7 dtex can be used to improve the coverage of nonwovens, as the same grammage will increase the number of fibers pr. m<sup>2</sup> with approx. 30%, thereby improving the uniformity of the coverstock.

# Durable Hydrophilic Fibers

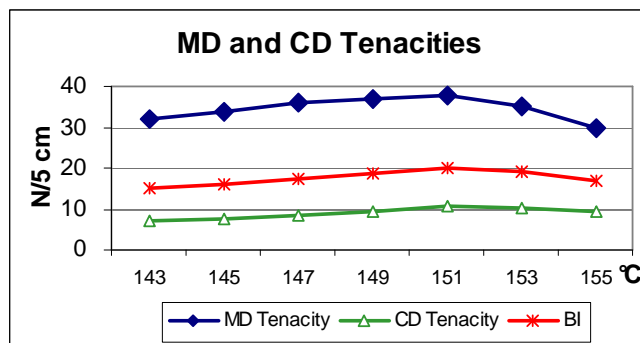
Fine fibers also improve the softness and drapability of the fabrics.

The coarse fibers can benefit the constructions of acquisition and distribution layers, as they ensure a good bulkiness of the structure and thereby allow a fast and controlled liquid distribution.

Typical fiber and nonwoven properties are shown overleaf. Fiber properties are given for fibers between 1.7 and 3.3 dtex.

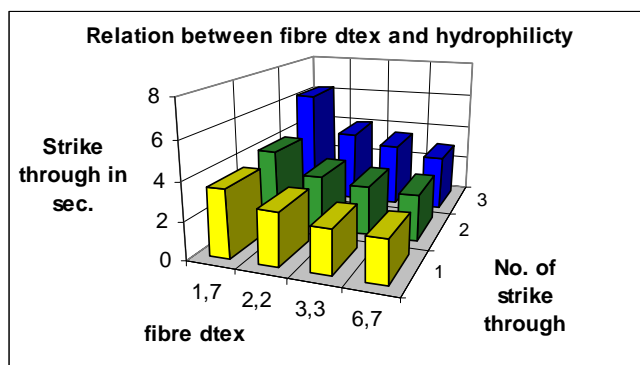
## Result from FiberVisions a/s pilot carding & calendering line

FiberVisions has obtained the following nonwoven data from tests on the pilot carding and calendering line at 100 m/min (typical data for a 20 g/m<sup>2</sup>-product at 100 m/min):











## Strike Through Times










The below figure illustrates the hydrophilicity of the HY-Repeat fiber based nonwovens: Slowly, the spin finish will be "washed-off" and change the characteristics of the fiber surface and result in longer strike through times:



# Typical Fibre Values

# and Nonwoven Properties

 <b>FiberVisions® HY-Repeat</b>			
	Nom. Value	Measure	Method
	1.7, 2.2 and 3.3 dtex	The weight in grams of a fiber of 10 km length	Internal FV-test
	1.7-2.0 cN/dtex	Bursting strength of the fibre	Internal FV test
	320-400%	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	
	Variable	Crimp frequency (KD) no. of crimps/10 cm	Internal FV test
	0.55%	Spin finish level as weight %	Internal FV test

 <b>Typical data obtained on FiberVisions pilot thermal bonding line</b>			
	Nom. Value	Measure	Method
	All values refer to a 20 g/m <sup>2</sup> nonwoven, produced at optimum conditions at 100 m/min		
	16-20	Bonding Index, multiplying MD and CD tenacities	Formula
	31-40 N/5 cm	MD Tensile Strength	Internal FV test
	7--12 N/5 cm	CD Tensile Strength	Internal FV test
	50-80%	MD Elongation	Internal FV test
	90-130%	CD Elongation	Internal FV test
	< 3 sec	Strike through time	WPS 70.3
	< 0.15 g	Rewet	WPS 80.10

\* 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% 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, be assured all applicable regulations are met.

For further information, see Material Safety Data Sheet or contact your FiberVisions representative.

The fiber HY-Repeat is a trademark of FiberVisions®.

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

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