

Creating a new differentiated soft nonwoven fabric

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Key advantages

- Enhanced soft touch feel - silky and cottony
- Enhanced comfort
- Consistent quality
- Stable high-speed processability
- Opportunities to create differentiated hygiene products

JOFO (Weifang) Nonwovens Co., Ltd. has created a new differentiated nonwoven fabric by increasing the dosage of Vistamaxx™ performance polymers in a formulation with an ExxonMobil™ polypropylene (PP) resin which it first developed for its “SilkSoft” product about five years ago. The new premium nonwoven fabric, R1, meets the needs of brand owners by offering an ultra-soft-touch feel, low fluff, consistent quality and stable high-speed processability. The soft-touch feel provided by Vistamaxx polymers combines cottony and silky softness and is comparable to carded air-through nonwovens. ExxonMobil PP3155E3 resin provides excellent spinnability and consistent product quality.

Over the years, softness has become a basic requirement of nonwoven fabrics because it delivers comfort to hygiene applications such as the backsheet and waistband of baby diaper/adult incontinence products. Today, brand owners are looking to upgrade their hygiene products with fabrics that offer superior softness balanced with enhanced processability.

Collaborating for success

Keen to respond, JOFO (Weifang) one of China’s major suppliers of nonwoven fabrics to international brand owners, turned to ExxonMobil. The two companies have a 10 year history of long-term collaboration and joint development which resulted in JOFO (Weifang) becoming the first customer to successfully commercialize a Vistamaxx polymer-based soft nonwoven fabric solution.

"Our collaboration with ExxonMobil over the years has been key to a mutually successful relationship," said Peng Wenzhong, plant manager, JOFO (Weifang) Nonwovens Co., Ltd. "As well as high-performance materials with consistent product quality and reliable supply, they offer expertise in value chain engagement. This has proved invaluable in helping to shape the soft fabric market and influencing decision makers downstream."



Creating a differentiated nonwoven fabric

To create a new softer nonwoven fabric solution, the companies first looked at the existing formulation of "SilkSoft", a nonwoven fabric that has proven successful since it was introduced. The formulation comprised a lean blend of Vistamaxx polymers with ExxonMobil PP3155E3 resin.

"ExxonMobil PP3155E3 is well-suited for spunbond production because it combines high and consistent quality with high-speed processability," said Peng. "And Vistamaxx polymers, a drop in solution, offer unique softness when dry blended with PP."

After tests of different formulations, it was discovered that increasing the dosage of Vistamaxx polymers provides an ultra-soft-touch fabric combining a silky and cottony feeling, consistent product quality and stable high-speed processability on diaper lines.

Brand owner breakthrough

The new premium tier nonwoven fabric, R1, is already enjoying success among domestic and international brand owners.

"Feedback has been very positive which is important because softness is very subjective," said Peng. "Brand owners are now upgrading and differentiating their portfolio to meet downstream requirements, and we are already seeing some significant breakthroughs with key industry players."

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