RISE TO THE CHALLENGE: CLARIANT/COTTON INCORPORATED

This series of features examines the work that companies all along the textile supply chain carry out in partnership with one another. In this issue, we look closely at the joint efforts of specialty chemicals manufacturer Clariant and cotton innovation specialist Cotton Incorporated to make cotton apparel easier to care for.

New finish brings non-iron cotton clothes closer



Easy care fabrics and garments are an important part of the sustainability story.
Clariant

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It took two years of hard work, but towards the end of 2011 Swiss textile chemicals manufacturer Clariant announced that a partnership with cotton research and marketing organisation Cotton Incorporated to develop a new finish for cotton fabrics had reached a successful conclusion. Clariant said that laboratory and field tests of a resin-based foam finish application, Foam Eco Care, indicated that cotton fabric producers will now be able to achieve better results on wrinkle-free and non-iron fabrics, especially suitable for shirts and trousers.

As the name suggests, the finish is applied using foam, as opposed to pad technology, but Clariant has said the tensile strength and abrasion resistance of fabrics treated with the product will compare well with the performance of fabrics treated using pad technology. At the same time, it claims foam technology can result in reduced use of energy and chemicals. The basic argument here is that spraying measured quantities of the textile finish onto the fabric is a more efficient use of the chemicals than curing the fabric and waiting for it to dry.

Field tests have taken place in a range of textile mills in Italy with positive results. Companies taking part in the trials used cotton fabric of 130 grammes per square-metre and denim of 345 grammes per square-metre. To apply the foam, they used CFS technology from North Carolina-based Gaston. Gaston describes CFS as "a highly controlled, patented system for accurately applying foamed water-soluble or water-dispersible chemicals onto or into substrates such as textiles, carpet, nonwovens, paper, and others". With this technology, the foam had less wet uptake, the fabric dried faster and the dwell time was 25% less than using pad application. While tensile and tear strength were equal to pad application, as was the smoothness achieved, participants found that the foam application had better flex abrasion when compared with pad technology.

A senior textile chemist at Cotton Incorporated, Ken Greeson, said after the successful conclusion of the trials that, compared to the conventional pad application of special finishes, the new process offered "major advantages" to garment manufacturers and brands who want to make cotton clothing easier to care for. He says: "You could say that Foam Eco Care proves the old adage that two heads are better than one. This new process has major advantages over conventional pad application and we are sure it will be welcomed right across the industry."

For his part, the head of finishing at Clariant's textiles business unit, Georg Lang, says the economics of the new system are sound. "Foam application machinery is now generally used within modern textile mills and adapting to Foam Eco Care should not be difficult or require any serious investment. "Where mills need to introduce foam application equipment, which can be used for purposes other than just durable press finishing, the payback time would be very short," he says. Based in Singapore since 2011, Clariant's textiles business unit provides a range of chemicals for pre-treatment, dyeing, printing and finishing of textiles.



Clariant and Cotton Incorporated have worked together to develop Foam Eco Care to help cotton fabric producers achieve better results on wrinkle-free and non-iron fabrics.

Clariant

Rickey Bearden, the chairman of its partner organisation for Foam Eco Care, Cotton Incorporated, said recently that sustainability issues represent major change for cotton producers the world over. He said producers had to look for ways of reducing energy and water while maximising yields, but he added that people and companies at the fibre end of the supply chain are also conscious that textile manufacturers, brands, and retailers are also keen on better environmental performance without any compromise on quality. Easy-care garments help any clothing brand's sustainability story because a textile effect that means lower wash temperatures and no ironing for the lifetime of a garment are indicators of a lower carbon footprint for the product.

"We see how the supply chain is becoming more active in trying to define, or at least monitor, progress in reducing our ecological footprint," Mr Bearden has said. "We face the possibility of more regulation and prescriptive definitions of sustainability by our customers. Our solution is to continue the vigorous research in this area and to look for ways for continuous improvement, as well as communication of that improvement." Projects in partnership with players such as Clariant on Foam Eco Care are part of this.

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