Embracing Change
Building a world-class facility in Atoto, Mexico
Making Great Strides in Sustainability
Diversity in Digital Print

www.huntsman.com/textile_effects
Embracing Change

Leading the change in the global textiles sector, Huntsman Textile Effects is charged to promote collaboration, accelerate innovation and achieve greater speed and agility.

Change is reverberating throughout the textiles value chain and gaining momentum worldwide. None of us can avoid the responsibility of more stringent and complex regulatory requirements, rising consumer expectations, heavy environmental and competitive pressures. But we can take heart in the fact that we are stepping out on the road to sustainability together.

As your trusted supplier of textile chemicals and dyes, Huntsman Textile Effects is committed to supporting you, our customers and partners around the world. This commitment has demanded that we substantially review and refine our operations and processes to meet ever changing demands and external influences. The revolution of our industry will continue at pace in 2014 and we are now better able to help you meet your toughest challenges through innovation and collaboration. In times like this, one needs to innovate in order to differentiate and survive. I firmly believe that the ability of Huntsman Textile Effects to do so sets us apart as we continue to spend 5% of annual revenue to keep our products on the cutting edge of innovation while many of our major competitors are in a consolidation phase.

Working towards a sustainable textile supply chain will be a key business driver for the industry in 2014 and beyond. A change of this magnitude requires great collaboration and we, at Huntsman Textile Effects, stand ready to support you in doing so in the coming year.

Finally, on behalf of all of the Huntsman Textile Effects team, I’d like to extend my best wishes to you for a happy holiday season and a healthy and prosperous new year. Thank you for your ongoing support. My management team and I look forward to forging a closer business relationship with all of you in 2014 and to progressing on our shared journey to sustainability with you.

Paul Hulme
President
Huntsman Textile Effects
Building a world-class facility at Atoto, Mexico

Huntsman Textile Effects recently expanded the capacity and upgraded the existing facilities of our site at Atoto, Mexico. The major improvements that we have made will help to serve your needs with greater speed and flexibility.

The production of several key specialty intermediate and solvent based dyes has been transferred from Basel, Switzerland to Atoto and is progressing well. With this in place, Atoto now becomes an integral part of our global manufacturing footprint as it produces some of our key reactive dye products in addition to our comprehensive range of dyes and chemicals. The proximity to where your business is located will result in improved product leadtimes for some of the most critical products which we supply to you.

Several facility improvements have been completed. These include the construction of a new extension to house the solvent based production line as well as the installation of new spray dryers. We have also hired over 40 new associates to strengthen the team at Atoto in the areas of technical and production while at the same time utilizing the Six Sigma approach to boost our process efficiencies.

Environmental, health and safety (EHS) standards remain our utmost priority. Atoto excels in Process Safety Management and has been operating with an impeccable EHS record over the years. Even with ramped up production at the site, the facility continues to operate at stringent global EHS standards. This ensures that the products we supply to you are always produced in the most responsible manner while preserving their high quality. Additionally, the site maintains an on-site emergency brigade which is well trained and vigilant. As part of giving back to the local community, this brigade is on standby to respond to situations in the community should the need arise.

“The new upgrades at Atoto are crucial as we are ramping up to seize the growth that we foresee in the years ahead,” said Jack Larkins, Commercial Director for North America. Echoing his sentiments was Freddy Vasconcelos, Commercial Director for South America. “The investment in the Atoto facility is a clear demonstration of our confidence in the continued growth of the market in America and it is a crucial part of our ability to serve our customers with greater speed and flexibility.”
In a milestone for the development of waterless dyeing using carbon dioxide (CO₂), NIKE Inc. and its innovation partners came together to celebrate the opening of Far Eastern New Century Corp.’s new dyeing facility in Taiwan on 5 December, 2013.

The facility features the Supercritical CO₂ technology invented by DyeCoo Textile Systems B.V. which uses recyclable carbon dioxide as an application medium in the fabric dyeing process, thereby eliminating the use of water and other process chemicals.

“As a key innovation partner, Huntsman Textile Effects has collaborated with DyeCoo for the past three years to help bring the Supercritical CO₂ textile processing technology to market. This emerging technology has the potential to revolutionize the textile manufacturing process and it is very satisfying to see the first of NIKE Inc.’s ColorDry products derived from this new process and our dyes,” says Steve Gray, Vice President of Strategic Marketing and Planning at Huntsman Textile Effects.

The factory opening and technology demonstration attracted a great deal of attention from government leaders, energy management companies, textile mills and global media.

“Presenting a manufacturing innovation that provides environmental benefits while enhancing garment quality, the ColorDry launch attests to the successful collaboration of NIKE Inc., DyeCoo, Huntsman Textile Effects and others. Along with our progressive business partners, Huntsman Textile Effects remains deeply committed to driving innovation and sustainability in the textile industry,” Mr. Gray continues.
A Class of its Own
Charlotte facility wins top risk management award

The Huntsman Textile Effects Charlotte facility, located in North Carolina, is a proud recipient of the Highly Protected Risk (HPR) award given by FM Global, one of the world’s largest commercial and industrial property insurers. The HPR award recognizes the Charlotte team’s outstanding commitment to risk management and property loss prevention.

Charlotte is the fourth site within Huntsman Corporation to achieve this award, and the first in Huntsman Textile Effects. With locations scored according to how well they manage insurance risks, the award indicates that the Charlotte site is secure and has an adequate sprinkler installation and that all measures are being taken to prevent or at least minimize damage by fire or natural disaster.

Charlotte obtained the maximum score for its risk management measures and ranks as number one in Huntsman Corporation in this field. This award is a testament to the diligence of every member of the Huntsman Textile Effects Charlotte team in ensuring that they and the Charlotte facilities are ready to cope with any potential disruption.

Sustainability Focus Sets Fujian Abuzz
Lively seminar offers information and insights

A total of 126 delegates, representing textile mills and local and international brands, participated in the Huntsman Textile Effects seminar in Fujian on 10 October, 2013. Our sales, marketing and technical teams presented on a wide range of topics, sharing our latest strategies and collaboration opportunities, offering insights into the industry on how to manage the challenges of sustainability and Zero Discharge of Hazardous Chemicals (ZDHC) facing the industry and providing details of sustainable solutions in pretreatment, dyeing, finishing, especially focusing on Durable Water Repellency (DWR) and the transition to C₆ short-chain chemistry products.
Customers contributed a great deal to this lively event, raising questions and sharing experiences, as did our business partners Jinjiang Hengtai and Guangzhou Changli.

The China commercial and technical teams received very positive feedback on the seminar and have been busy engaged in follow-up work, providing product samples, organizing lab trials and setting up meetings to address the identified needs of key customers. The Fujian event is an example of how Huntsman Textile Effects engages with customers to share our expertise and help you solve your toughest challenges and drive sustainability throughout the textile value chain.

Making Great Strides: Sustainability in China

Huntsman’s sustainability journey continues at Planet Textiles

Industry leaders from across the global textiles sector came together in Shanghai, China on 22 October to tackle sustainability issues at Planet Textiles 2013. The industry’s premier sustainability conference attracted more than 220 participants from 24 countries this year. Running concurrently with the Intertextile Apparel Fabrics exhibition, Planet Textiles 2013 took “Sustainability in China” as its theme.

As a sponsor, Huntsman Textile Effects had displays at both the Planet Textiles Conference and in the “All about Sustainability” zone at Intertextile. We attracted a steady stream of visitors interested in learning more about products such as PHOBOTEX® and AVITERA® SE and our digital inks.

Representing Huntsman Textile Effects at the conference’s well-attended panel discussion, Steve Gray, Vice President of Strategic Marketing and Planning, spoke on the subject “A Shared Journey towards Sustainable Textiles.” He outlined pressing environmental issues facing the textile dyeing sector and the significant role that chemical companies play, emphasizing the importance of a sustainable textile industry and how Huntsman Textile Effects has helped to drive this process through successful collaboration with various stakeholders. The presentation garnered positive feedback and, together with other speakers’ content, encouraged lively discussion among the industry audience.

Among the notable brands represented at Planet Textiles 2013 were Amerella, Converse, Esprit, H&M, Ikea, Lidex and Marks & Spencer, along with such leading mills such as Aditya Birla Group, Billion Union Textile, Foshan XinGuang, Gunzetal Shanghai, Hanesbrands, Jiangsu Lianfa and L-Fashion Group.

Huntsman Textile Effects continues to pioneer change in the textile industry through an all-round approach of Sustainability, Innovation and Collaboration!
Steering the Digital Drift

High-energy SGIA Expo reflects industry interest

As the North American gateway to the global imaging marketplace, the SGIA Expo 2013 showcased the industry’s most innovative technologies and companies. Held on 23-25 October, 2013 in Orlando, Florida, USA, the exhibition was a chance for attendees to explore the full spectrum of specialty imaging, from wide- and grand-format to garment decorating, industrial applications and finishing and installation.

With machine marketers, mills, brands and retailers in mind, Huntsman Textile Effects promoted our capabilities in digital inks for textiles suited for use across different printing heads. The Industrial Fabrics Association International (IFAI) show co-located at the same venue this year also enabled our product innovations to gain extra exposure.

The Huntsman Textile Effects booth was visited by well over 100 customers, with many showing positive interest in our solutions for the digital inkjet market. The event allowed us to showcase our technical superiority in the area of digital inks, especially our -XKS range for industrial machines using Kyocera heads.

Showcasing Digital Diversity

Digital inks in the spotlight at the first FESPA China

With an established global reputation as the industry’s leading screen printing and digital imaging exhibition, the FESPA show made its first foray into China on 18-20 November, 2013. Held in Shanghai, the event was co-organized by China Screenprinting & Graphic Imaging Association (CSGIA).

As a leading certified water-based textile inks manufacturer in digital printing, Huntsman Textile Effects was at this event to present solutions that help businesses innovate and compete on the international stage. Our industry-leading digital inks are suited for use with Kyocera, Seiko and Epson heads and compatible across a wide variety of applications and
fibers. Such versatility enables customers to produce an extensive range of products for different sectors, including apparel and fashion, swimwear, home textiles, signage and automotive.

More than 150 customers connected with Huntsman Textile Effects during FESPA China, sharing their business challenges and expressing keen interest in our digital solutions. Our collaboration with leading print head and machine manufacturers and software partners allowed us to advise customers on how to adopt digital printing technology in combination with our inks.

With our cutting edge technology and vast industry knowledge, Huntsman Textile Effects remains well-positioned to help customers enhance their business competitiveness in digital printing.

**SUSTAINABLE INNOVATION IN ACTION**

**DICRYLAN® SD: Delivering unparalleled, never-before-seen depths of shade on all fibers**

*Unleash the power of the dark side*

Brands and retailers continue to demand deeper shades, especially blacks, without any compromise on stringent fastness requirements. This is often a very difficult balance for the dyer to achieve as typically the color depths of blacks or navy shades can be limited simply by the fastness standards that are required.
DICRYLAN® SD, with its technological breakthrough in achieving unparalleled color depths on all fibers, now allows such standards to be met without compromise on fastness properties.

Based on a silicone-functional polymer and novel approach of light scattering and absorption together with light polarization, DICRYLAN® SD allows ultra-deep shade enhancement effects which cannot be realized by dyeing only.

Extensive testing has found that DICRYLAN® SD improves color depths to unparalleled levels:

- Up to 50% increase in relative depth on reactive dyed cotton
- Up to 60% increase on disperse dyed polyester and polyamide
- Up to 20-30% depth enhancement on 100% wool

There is no longer a need for the sulphur over-dyeing step traditionally carried out to achieve super black effects on cotton, hence avoiding issues with metamorism and fastness. Compared to other competitive products, DICRYLAN® SD exhibits very little movement in tone and shows consistent on-tone build up after finishing even at higher loadings.

For enhanced performance, DICRYLAN® SD can be combined with AVITERA® SE dyes to ensure dyeing and clearing off in a quick and efficient way, even at ultra-short liquor ratios. Additional benefits include reduced water and energy consumption of up to 50% and more, together with improved productivity of up to 25% and more.

**AVITERA® SE**

A New Benchmark for Red Shades

Whatever fashion trend or season, whether it's creating the look for sleek professional workwear or a sassy dress, red shades make a bold fashion statement.

Wet processing for red and deep red shades often come with the challenge of long wash-off cycles and treatments before it can achieve acceptable wet fastness levels. Current best available technologies in the market offer only a moderate after dyeing wash-off profile for red shades. This leads to long wash-off cycles and a considerable amount of resources being utilized in production.

Now, with AVITERA® SE for Red Shades that requires only 3-4 washing-off baths and washing-off temperatures at 60°C even for deep shades, your business can reap the benefits of economic and environmental sustainability as we open up immense opportunities for all depths of red!
With a global presence that ensures we can serve you wherever you are, Huntsman Textile Effects also actively participates in key industry events around the world.

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<tr>
<th>Date</th>
<th>Location</th>
<th>Event</th>
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<tr>
<td>21-23 January, 2014</td>
<td>Medellín, Colombia</td>
<td><strong>COLOMBIATEX</strong></td>
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<td>Join us at this preferred trade event to access the Latin America textile market. You can mingle with key players in the textile supply chain and view our solutions in digital inks, rain and stain management and other textile effects that can help you drive your business!</td>
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<tr>
<td>8-10 April, 2014</td>
<td>Hannover, Germany</td>
<td><strong>Inprint 2014</strong></td>
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<td>Meet us at InPrint 2014, the leading trade show focused on industrial print technology, innovation and production. Explore our range of digital inks for use across various industrial print heads as we showcase the potential of inkjet in a variety of manufacturing applications!</td>
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<td>16-18 April, 2014</td>
<td>Shanghai, China</td>
<td><strong>China Interdy</strong></td>
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<td>At this integral exhibition for the textile industry in China, Huntsman Textile Effects joins a global gathering of dye and chemical manufacturers in presenting the latest developments in the dyestuff manufacturing sector. Visit this show to see how our comprehensive range of products can help drive sustainability for your business.</td>
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<td>23-26 April, 2014</td>
<td>Jakarta, Indonesia</td>
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<td>With a theme of &quot;Strengthening Textile &amp; Clothing Products Competitiveness through New Innovation,&quot; this event provides an ideal platform for textile machinery and accessories manufacturers to interact and discuss the latest innovations in the industry. Huntsman Textile Effects presents a myriad of innovative products suited to many textile end-uses and designed to help businesses remain competitive while staying sustainable!</td>
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Please note that products may differ from country to country. If you have any queries, kindly contact your local Huntsman representative.

Huntsman is a member of:

( Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers)

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