

Vital lifeline

New product developments on show at IFAI Expo Americas 2011 are designed to answer real needs from industry, writes **Kathlyn Swantko**

“WE NEED you to help us learn about safety and protective materials,” said Henry Costo, Battalion Chief and Safety Officer for the Philadelphia Fire Department. “We need a network for personal protective equipment (PPE). In the post 9/11 era, we need all-hazard gear that has breathability.”

Addressing a group of attendees at the Advanced Textiles 2011 Americas Keynote Luncheon, Battalion Chief and Safety Officer for the Philadelphia Fire Department, Mr Costo emphasised the dire need for fire departments across the country to have access to better designed PPE.

“We need equipment that provides a balanced relationship between fire protection, thermal protection performance (TPP) and thermal heat loss (THL), relating to breathability and the ability to release vapour from the body!”

This plea stresses the importance of textile trade shows and conferences like IFAI Expo Americas that continually encourage the development of new fabrics for specialty end-use applications. The Advanced Textiles Conference was one of several cutting-edge technical symposiums presenting new research and game-changing developments in a wide range of specialty textiles, which ran concurrently with the 3-day Expo Americas 2011, held from October 25-27 in

Baltimore, Maryland.

Future Materials highlights some of the new specialty products presented at this year’s IFAI Expo Americas, targeted not only towards the PPE market, but also on new developments created for a variety of other industrial applications.

Bondcote featured two new products at the show. For the marine market, the company’s new AeroFlate inflatable boat fabric uses a proprietary process and a thermoplastic coating system to impart strength, durability, and UV resistance onto a high strength substrate. This innovative fabric will ensure the highest degree of toughness, even in the roughest waters. The fabric is inherently rot-proof and not unduly affected by seawater, oil or fungal attack.

“In the past, the fabric of choice for inflatable boats has been polyurethane,” said Sherry Fisher, government and shelter program manager for Bondcote. “However, our new fabric is a PVC product with a unique coating process that makes it impermeable.”

Bondcote also introduced its new Nano-Spear treatment for fabrics targeted towards the medical market that inhibits the most resilient bacteria and micro-organisms including mould, mildew, and fungi. According to Fisher, Nano-Spear is not a leaching poison, contains no depleting heavy metals, is water-based, and is

permanent through the life of the fabric.

Fisher explained: “Nano-Spear can be used with any of our Bondcote fabrics, and consists of an integrated bed of nano-size spikes that lie in wait to puncture the cell walls of invading microbes, killing them as they come to rest on the fabric’s surface. The NANO-Spear technology is a totally new approach in providing long-lasting antimicrobial protection for coated fabrics used in medical equipment, such as wheelchairs and stretchers.”

Saint-Gobain Performance Plastics launched its new Coretech Barrier Membrane Technology platform, which enables the engineering of versatile lightweight chemical and biological-protective composite fabrics for storage, transport, food and personnel applications. Coretech has already been demonstrated in a range of applications including: its ONESuit line of hazmat suits; the lightweight CBRN fabrics to reduce set-up and tear-down times for protective shelters; its potable water containment reservoir units for personal hydration; and for chemical or fuel containment bladders or tank liners.

The new Coretech Barrier Membrane Technology allows for highly innovative solutions that improve product performance and cost-effectiveness. Suitable for use with a wide range of fabrication methods such as welding or stitch and over-tape, Coretech facilitates the development of engineered solutions to a whole range of barrier and containment challenges.

Developed through Saint-Gobain’s expertise in Fluoropolymer (PTFE) films and fabrics, Cortech Barrier Membranes are made by combining different polymers, elastomers and woven/nonwoven substrates to achieve unique combinations of technical properties to address



Offray Special Narrow Fabrics’ polyester braid with electrical wiring



IFAI attendees review fabrics in IFAI Expo’s Fabric Sourcing Center

a variety of required performance levels.

Darlington Fabrics, the warp knit division of the Moore Company Textile Group based in Westerly, Rhode Island, introduced its new Fasten-Air, a stretch unbroken loop (UBL) fabric at IFAI Expo Americas 2011. Darlington's warp knit loop fabric is strong yet soft, and is available in a variety of widths and weights.

According to Tony Latrechiano, sales manager for Darlington, Darlington's Fasten-Air UBL fabric with spandex stretches for comfort and function, and is available in varying degrees of compression. He said that manufacturers can choose the best fit for a specific application, and added it is also machine washable. Customers can also request custom colours, and other options.

"Darlington also offers Fasten-Air with Odorexx for long-lasting freshness and anti-odour protection, or Naturexx, which wicks moisture away from the body for breathability and comfort," he said.

American & Efird featured its latest Super Brite Polyester UV embroidery thread at the Expo. According to Mark Hatton, A&E's director of marketing & sales, the new development is a premium twisted polyester embroidery thread, finished with a proprietary enhanced UV protective treatment to maximise protection against UV degradation and colour fade. Hatton explained: "The product was developed for customers looking to personalise outdoor and marine products such as flags, cushions, banners, sail covers, car covers, and any other product that a customer would desire to become unique. Multiple colours have been developed, however we also have the ability to custom match as required."

The features of the product include superior sewability and fewer thread breaks; excellent stitch formation and appearance; and is available in 5,500 yard (5000 metre) king spools

featuring A&E's easy storage snap base. Super Brite Polyester UV thread is made in the USA at A&E's North Carolina manufacturing facility.

Offray Specialty Narrow Fabrics (OSNF) and **Fulflex Elastomerics Worldwide** officially announced the launch of their new co-oped product, FR-Flex, at IFAI Expo Americas. The new FR-Flex collection offers improved FR capabilities for an upgraded no melt/no drip performance; increased design options for a thinner, flatter design; and a better hand, while not sacrificing performance. End-use applications for the new product line includes harness webbing for SCBA (self-contained breathing apparatus), elastics for face masks,

straps for thermal imaging cameras, suspenders and belts for pants and lifelines as well escape ropes for safety. All products are engineered to meet NFPA Standards.

"We are excited and pleased to introduce this next generation of FR Elastics, along with our existing broad-based product line, and are proud to offer these innovations to the industry," said Denise Offray, COO for OSNF.

www.bondcote.com
www.plastics.saint-gobain.com
www.darlingtonfabrics.com
www.amefird.com
www.osnf.com



Spools of American & Efird's new UV Super Brite Polyester embroidery thread

The best of the best

The IFAI International Achievement Awards recognised design excellence in the speciality fabrics industry

IFAI RECEIVED a total of 385 entries from 16 countries for this year's International Achievement Awards and winners were selected based on complexity, design, workmanship, uniqueness and function.

Among the winners in 33 categories was Australia's Fabricecture for its 11 shape canopies in varying sizes for the Eagle Street Pier Waterfront refurbishment in

Brisbane, Australia, in the Tensile Structures, under 600 sqm sector.

The tensile fabric shade sails replaced existing structures and provided new structure3s around restaurants and bars, with a total of 500 sqm of PTFE and 230 sqm of PVC.

The precinct, one of Brisbane's prime dining areas, was ravaged by the recent Queensland floods and so a key

requirement of the project was the design and installation of an extensive storm water management system which included water collection, drainage, electrical and lighting.

For some of the replacement shade sails PVC was replaced with PTFE, more than 15 years after the original installation. In order to provide a solution that was both cost-effective and practical, membranes