

How the protection industry responds to threats?

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In order to understand how the protection industry is empowering itself to deal with threats, Smart Kevlar® Review spoke with Marcelo Fonseca, DuPont Latin America Defense Sales Leader. He highlights the relevance of product development through innovation and talks about exploring the opportunities that the market presents.

He also addresses the appreciation of end-users, such as the military and the police, as well as what to expect from the next generation of bulletproof vests and preferences on automotive armor.

The Smart Kevlar Review: How threats drove the protection industry in new product development?

Marcelo Fonseca: The protection industry, like others, is driven by challenges, having seen the much commented subject in July of this year, the 50th year anniversary of the first man to walk on the moon. For this event, almost all the materials used in the clothing of the astronauts were provided by DuPont. Specifically, products that serve the military and police, such as Kevlar® and Nomex®, respectively, as the ballistic and fire protection industries have been demanded by numerous government entities for employment in many conflicts, including wars. And it was based on this scenario of extreme threats that have developed over generations of Kevlar® and Nomex®, for over 50 years in the global protection market.

SKR: How has the protection industry responded to today's threats?

MF: The industry that traditionally values innovation and delivers quality and durable products respond well when demanded by end users who treasure safety and have a real appreciation for life protection. However, few end users, the military and the police have expert staff and generate demand for products that go beyond mere compliance. And for companies like DuPont , that are aiming at the cutting edge of problem-solving technology, these are the opportunities that interest us.

Clear proof of how we value the direct dealing with the end user is the fact that in Brazil, we maintain an Innovation and Technology Center to support the demands from Latin America. In the labs of this center, the routine is to challenge the technical and operational requirements of end users and thus help the local industry to certify the most modern products in line with the practices of the governments of major world economies.

SKR: In a multi-threat scenario, such as the ones in urban conflicts, how will the next generation of vests deal with different types of impacts?

MF: Vests have long ceased to focus solely on protection against the usual projectiles of revolver and pistol weapons. They also protect against special piercing ammunition; they can withstand the firing of higher-caliber machine guns and rifles, as well as protect from shrapnel from different explosions, increasingly common with the use of makeshift devices, typical of what we call 'dirty war.' There is also the chance of developing ballistic vests that protect from stab wounds or other sharp objects or even be fully fire resistant.

Besides the versatility of being able to customize the level of protection, we can also develop vests, as well as helmets and ballistic shields, which result in less trauma to the human body when impacted. This increases the survival rate by minimizing the risk of internal bleeding, generated not by puncture, but as a result of the spread of shock waves on the combatant's body. Low trauma anti-ballistic products are key to the user's health, directly impacting a greater ability to combat.

SKR: What are the pillars that support the search for new solutions in the fields of security and protection?

MF: The search for new safety and protection solutions is based on the level of protection, durability and price, so that it is possible for massive adoption by all safety agents.

Regarding the level of protection, it is essential to consider the most likely threats that prevail in each region and not simply to rely on international standards, which often refer to threats that are not representative. Concerning durability, DuPont encourages the end user to demand aging testing by differentiating our commoditized solutions that meet minimum requirements and are often tested and approved only as a new, unused item.

Finally, price, this is an inexorable pillar that we must keep in mind: there must be a portfolio of solutions that allows the manager to scale his budget to protect all of his troops.

SKR: What can be said about trends in this industry when it comes to short- and medium-term solutions?

MF: In Brazil, and throughout Latin America, there is a very particular trend, which is the growth by armor of civilian vehicles that does not change the features of vehicles. This is due to known levels of insecurity that persist in certain urban centers. Solutions for this market have long been dominated by Kevlar® and there is a trend to look for thinner and lighter solutions to ease installation and reduce the loss of vehicle originality.

For body protection, the short-term trend is the search for lighter solutions, which does not always represent more comfortable solutions for the user.

Medium-term trends will ensure better ergonomics and durability, as well as reduced trauma, even when multiple impact resistance is required, including special ammunition.

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