

DSM and MKU Ltd. provide high-performance, lightweight ballistic protection

Royal DSM, a global science-based company in Nutrition, Health and Sustainable Living, recently announced that, together with armor manufacturing partner, MKU Ltd, has provided next generation armor technology with Dyneema® unidirectional (UD) material to support the Sao Paulo police.

The Sao Paulo police, which is comprised of more than 100,000 officers, is the first law enforcement agency in Brazil to initiate a tender for personal protective equipment based on the latest National Institute of Justice (NIJ).06 standards for body armor, which provide comprehensive and rigorous compliance for the performance and testing of ballistic materials. In addition to NIJ.06 certification, the tender set extremely lightweight requirements for level IIIA soft armor vests.

The hybrid vest solution developed MKU, a global leader in defense and homeland security solutions, for the Sao Paulo police utilizes predominantly Dyneema® UD material to reach new levels of performance and protection while simultaneously enhancing user comfort and mobility. Dyneema®, the world's strongest and lightest fiber, is the leading global brand of choice for ultra-high molecular weight polyethylene (UHMwPE) fiber, UD and fabrics, offering ballistic solutions for personal and vehicle armor that combine maximum strength with minimum weight.

In soft armor applications, Dyneema® offers up to 35 percent weight reduction when compared to competitive

materials, while still protecting against both legacy and emerging threats – making it the material of choice for many of the world's elite military and law enforcement personnel.

“Together with Dyneema® material MKU, was able to deliver a level IIIA soft armor vest that increases wearer ergonomics while reducing weight by more than 20 percent when compared to the incumbent aramid material,” says Marcelo van de Kamp, Global Business Director, Personal Protection of DSM. “We're proud to provide a solution that meets the strict requirements of the Sao Paulo police to ensure the brave men and women of their department are protected with Dyneema®.”

In addition to the lightweight armor requirement, the vests were also thoroughly tested to ensure performance with NIJ ballistic reports, NIJ certification and in-house ballistic testing both during the tender process and after the vests were received.

“MKU is committed to providing the latest and most cutting-edge solutions to the Sao Paulo police,” says Neeraj Gupta, Managing Director of MKU. “These vests not only offer the best protection, they are extremely light weight and comfortable to wear.”

In line with DSM's commitment to protect people and the environment they live in, the world's first ever bio-based HMPE fiber was introduced in 2020. Bio-based Dyneema® boasts the same exact performance as conventional Dyneema® with a carbon footprint that is 90 percent lower than generic HMPE. DSM and MKU'S continued partnership in supporting the Sao Paulo police will not only provide innovative, lightweight solutions for armor technology in Brazil, but also environmentally sustainable alternatives that contribute to a circular economy. ♦

