

## **DSM Dyneema Expands Global Ballistic Materials R&D Capabilities for Helmets**

---

The Netherlands, May 8, 2017 - DSM Dyneema today announces expansion of its ballistic materials research and development capabilities specific to helmet applications. With this, DSM Dyneema is demonstrating its commitment to supporting global armor manufacturers seeking to create next generation lightweight, high performance helmet designs and technologies based on Dyneema<sup>®</sup> material advancements.

Expansion of the Tech Center in Heerlen, The Netherlands involves replacing existing equipment with upgraded technology, including a state-of-the-art helmet press, as well as bringing on additional personnel to join the team of development and testing staff. The improved facilities and equipment add to DSM Dyneema's current R&D capabilities; already, the organization demonstrates strong support to ballistic helmet manufacturers, with its Dyneema<sup>®</sup> material application development facilities and specialists in The Netherlands, the United States, and Singapore.

"This investment will improve significantly our material R&D capabilities to support our customers to develop next generation helmets. This represents an area where innovation is needed desperately to keep soldiers and law enforcement personnel protected from ever-evolving threats, while lightening their load to enable them to perform their duties effectively," says Marcio Manique, global business director, life protection, DSM Dyneema. "Adding these resources signals our intensified focus and intention to work closely with our customers to provide better insight into our materials that armor companies can use to speed up development and market introduction of new helmet designs."

Enhanced material R&D capabilities will enable DSM Dyneema's partners to realize more quickly the potential of best-in-class new materials, some currently available in the market, and some breakthrough new material technologies in late-stage development and soon to be introduced. These products offer the best combination of ballistic resistance and mechanical properties, and will enable game-changing innovation as has been seen with Dyneema<sup>®</sup> material for soft ballistics and hard ballistics in both personal and vehicle protection.

"Around the world, advanced armor solutions made with Dyneema<sup>®</sup> material are trusted to protect modern law enforcement and military organizations," says Manique. "Our goal is to reinforce our strong position in materials development for helmets similar to how our materials have helped customers raise the standard for protection in the personal, vehicle, boat and aircraft sub-sectors."



DSM Dyneema has a strong reputation for bringing to market the most advanced material science used by the leading armor manufacturers to create industry-leading helmet designs. Using innovative Dyneema® Force Multiplier Technology, Morgan Advanced Materials earned the opportunity to supply the Canadian Military Helmet with its LASA ultra-lightweight helmet series. Dyneema® Force Multiplier Technology is a key component of the ultra-lightweight hybrid composite that allowed Morgan's developers to reduce areal density of the helmet shell by 30%.

DSM Dyneema holds a technological leadership position in materials armor manufacturers use to develop other applications for soft ballistics and hard ballistics protection. Protective vests engineered with Dyneema® Force Multiplier Technology can reduce weight by up to 30 percent vs. traditional materials, which allows for hard ballistic inserts and side plates made with Dyneema® UD to be added for missions requiring a more comprehensive, all-round soft ballistics/hard ballistics protection, without compromising personal agility and comfort.

Advanced soft ballistics solutions made with Dyneema® materials are widely used in personal protection equipment combining proven high level protection at reduced weight and thickness for maximum comfort and agility. They are mission-tested, show excellent long-term performance, and maintain their superior protective function even under extreme ambient temperatures.

## About DSM Dyneema

DSM Dyneema is the inventor and manufacturer of Ultra High Molecular Weight PolyEthylene (UHMWPE) fiber branded as Dyneema®, the world's strongest fiber™. Dyneema® offers maximum strength combined with minimum weight. It is up to 15 times stronger than quality steel and up to 40% stronger than aramid fibers, both on weight for weight basis. Dyneema® fiber floats on water and is extremely durable and resistant to moisture, UV light and chemicals. The applications are therefore more or less unlimited. Dyneema® is an important component in ropes, cables and nets in the fishing, shipping and offshore industries. Dyneema® is also used in safety gloves for the metalworking industry and in fine yarns for applications in the medical sector. In addition, Dyneema® is also used in bullet resistant armor and clothing for police and military personnel. Furthermore, the new generation Dyneema® Fabrics offer next level innovations in denim, apparel, footwear, sports equipment and lightweight outdoor products and accessories. UHMWPE products from DSM Dyneema are produced in Heerlen (The Netherlands), Greenville, North Carolina (U.S.A.) and Mesa, Arizona (U.S.A.). DSM Dyneema is also a partner in a high modulus polyethylene (HMPE) manufacturing joint venture in Japan. Further information on DSM Dyneema is available at [www.dyneema.com](http://www.dyneema.com).

# Press Release



## DSM - Bright Science. Brighter Living.™

Royal DSM is a global science-based company active in health, nutrition, and materials. By connecting its unique competences in life sciences and materials sciences DSM is driving economic prosperity, environmental progress, and social advances to create sustainable value for all stakeholders simultaneously. DSM delivers innovative solutions that nourish, protect, and improve performance in global markets such as food and dietary supplements, personal care, feed, medical devices, automotive, paints, electrical and electronics, life protection, alternative energy, and bio-based materials. DSM and its associated companies deliver annual net sales of about €10 billion with approximately 25,000 employees. The company is listed on Euronext Amsterdam. More information can be found at [www.dsm.com](http://www.dsm.com).

Dyneema® and Dyneema®, the world's strongest fiber™ are trademarks of DSM. Use of these trademarks is prohibited unless strictly authorized.

All other trademarks are the property of their respective owners.

### If you have any questions or requests, please contact:

Patrick Smith  
DSM Dyneema  
Tel.: 1-704-678-4494  
E-mail: [press.dyneema@dsm.com](mailto:press.dyneema@dsm.com)

Amy Godfrey  
DSM Dyneema  
Tel.: 1-413-448-2260, x370  
E-mail: [agodfrey@ahminc.com](mailto:agodfrey@ahminc.com)