Developing Purpose-Built Fabric for the Demands of Ultralight Hunting Gear

Venom™ 200 HPU combines UHMWPE durability, high waterproofness, and the familiar handling of traditional pack cloth in a material developed from the yarn up.

DURHAM, N.C. — [March 2026] — Ripstop by the Roll (RBTR), a supplier and developer of technical textiles, developed Venom™ 200 HPU in collaboration with a leading ultralight hunting gear company to solve a problem that existing fabrics couldn't.

The goal was deceptively simple: create a pack fabric that was lightweight, exceptionally durable, highly waterproof, and easy to work with, and quiet—without relying on the laminated constructions commonly associated with high-performance UHMWPE materials.

The right material didn't exist. So RBTR developed it.

The result is **Venom™ 200 HPU**, a 4.3 oz/yd² technical pack fabric built around a tightly woven blend of 57% 200D UHMWPE and 43% 150D solution-dyed polyester. The construction combines the cut, abrasion, tear, and tensile performance of UHMWPE with the familiar feel and sewability of a traditional woven pack cloth.

Rather than using a film laminate to achieve waterproofness, Venom™ 200 HPU uses a thick, non-hydrolyzing polyether polyurethane coating. The construction achieves a hydrostatic head of greater than 5,000 mm, with testing exceeding 10,000 mm, while avoiding some of the challenges associated with laminated pack fabrics, including delamination and visible needle perforations.

The face of the fabric is finished with an enhanced C0 DWR that is PFC- and PFAS-free. Its solution-dyed polyester yarns are colored at the fiber level rather than through traditional piece dyeing.

But the development of Venom™ 200 HPU represents something larger for Ripstop by the Roll.

"Great products sometimes require materials that don't exist yet," said [Kyle, CEO/Founder] at Ripstop by the Roll. "Our role is to help product teams bridge that gap. We can start with the performance requirements of the finished product, translate those needs into a textile specification, and work through the development process to create the right material."

A key part of that capability is RBTR's network of textile mills and production partners across Asia. Different mills bring different strengths—from weaving specialized fibers and constructions to coating, laminating, dyeing, and finishing. Rather than forcing a project into a single production ecosystem, RBTR can match the requirements of a material with proven manufacturing partners that have the right equipment, experience, and technical capabilities to produce the material.

That approach represents the growing B2B side of Ripstop by the Roll. Beyond supplying existing technical fabrics, RBTR works with product designers and brands to navigate material selection, textile development, mill communication, testing, sourcing, and production.

For brands, that means less time trying to become textile experts and more time focused on building better products.

Venom™ 200 HPU is now available to brands, manufacturers, and individual makers through Ripstop by the Roll. Typical applications include backpacks, hunting equipment, bike bags, duffels, pouches, reinforcement panels, and other applications requiring high durability at a relatively low weight.

Ripstop by the Roll will showcase Venom™ 200 HPU alongside its broader portfolio of technical textiles at **SHOT Show 2027 in Las Vegas, Nevada**.

Visit Ripstop by the Roll at Booth #51038 to see Venom™ 200 HPU and discuss material sourcing and custom textile development.

About Ripstop by the Roll

Ripstop by the Roll brings the world's best technical fabrics to everyone on the planet. From individual makers to established product brands, RBTR provides access to high-performance textiles, components, material expertise, and custom development capabilities. By working between product teams and textile manufacturers, RBTR helps companies navigate the complexities of sourcing and developing technical materials and turn product requirements into production-ready solutions.

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