



GOING FURTHER, TOGETHER

ROBUST AS A COMBAT BOOT, AS COMFORTABLE AS A TRAINER: CONCEPT STUDY BY THE GORE-TEX® BRAND FOR MILITARY AND POLICE BOOTS

- REAL PROTOTYPES WITH LOW WEIGHT, HIGH WEARING COMFORT AND FATIGUE-REDUCING DESIGN
- ADVANTAGES OF THE GORE-TEX® EXTRAGUARD PRODUCT TECHNOLOGY ARE USED CONSTRUCTIVELY AND CAN BE FELT IN THE WEARING COMFORT

Putzbrunn, (6th March, 2026) – Combat boots are among the most critical equipment components for the military and police. They are permanently in use, carry the emergency services over long distances and under changing environmental conditions – and have a direct effect on performance, safety and fatigue. However, many professional models continue to be guided by established design principles, although modern material technologies today enable fundamentally new approaches to protection, comfort and moisture management. At the same time, the application profiles are changing: higher mobility, more frequent climate changes and longer wearing times significantly increase the functional requirements. A new concept study, by the GORE-TEX® brand, illustrates what is possible with EXTRAGUARD product technology in the design and construction of combat boots for military applications and tactical boots for police and government scenarios: the protection of a combat boot, with comfort of a trainer.

"The technical basis of the concept study is the GORE-TEX® EXTRAGUARD upper material. It is characterised by extremely low water absorption, fast re-drying and a consistently low weight, even in wet conditions – while at the same time being highly robust and resistant," explains David Bastias, Strategic Marketing for Footwear at the GORE-TEX® brand. "This material characteristic allows for unconventional design solutions that go beyond traditional boot construction methods – especially for uppers, protection zones and moisture management."

Development without existing design patterns

The study was created with a completely new design – comparable to a technical concept model. Instead of adapting classic leather constructions or typical seams, the boots were freshly designed around GORE-TEX® EXTRAGUARD technology in all components. Central to this new design is the use of fewer seams, which simplifies the boots construction and improves manufacturing efficiency.

The study also relied on an unconventional approach in the sole area: The ETPU midsoles of both prototypes come from the performance shoe sector and combine low weight, durable cushioning behavior with high flexibility. A modular torsion shank also provides the necessary stability. The total weight of the prototypes is around 1.2 kilograms per pair which is in line with the range of modern lightweight combat boots - but now offering improved wearer comfort.

Military and Police Boot Prototypes Compared

The concept study involved two prototypes for different mission profiles. Whilst both prototypes are based on the same basic design architecture and benefit from GORE-TEX® EXTRAGUARD construction – making them permanently waterproof and robust - they differ in the functional design of the individual components.

The combat boot for military applications, for example, is equipped with a "Ladder Grip" profile for a secure grip on ladders and metal structures – a frequently requested criterion in military tenders. This prototype was constructed using a Coyote coloured outer with a suede-like appearance.

The tactical boot for police and government scenarios, on the other hand, was constructed using a smoother, functionally oriented outsole. Here the focus was on walking comfort and freedom of movement in urban use. This boot was made with a black smooth leather.

Impulses for future developments

"The concept study shows the potential that arises when operational boots are consistently developed based on function and material-related design logic. This opens up a freedom in the design process which was previously hard to achieve in classical approaches," Bastias summarizes. "It opens up new avenues for the development of innovative military and tactical footwear concepts that can take full advantage of the GORE-TEX® EXTRAGUARD upper."

Ends

Gore revolutionised the outerwear industry more than 40 years ago with waterproof, breathable GORE-TEX fabric and continues to be a leading innovator in performance apparel. Gore's products provide comfort and protection in demanding environments and everyday life, allowing wearers to achieve and experience more safely and confidently. From pouring rain hikes to defense operations and firefighting, Gore's deep understanding of consumer and industry needs drives the development of products with significant performance benefits. gore-tex.com and goretexprofessional.com

About Gore

W. L. Gore & Associates is a global materials science company dedicated to transforming industries and improving lives. Since 1958, Gore has solved complex engineering challenges in demanding environments – from outer space to the world's highest peaks to the inner workings of the human body. With more than 13,000 employees and a strong, team-oriented culture, Gore generates annual sales of \$5 billion. www.gore.com

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