*1. Introduction*

Specifically engineered to provide superior waterproofness and breathability, GORE-TEX is constructed from an expanded polytetrafluoroethylene (ePTFE) membrane, this product meets the rigorous demands of high-performance protective and outdoor apparel. Certified according to EN 343 Class 3:3, this membrane is optimized for extreme weather conditions, ensuring both protection against water ingress and effective moisture vapor transmission.

*2. Standards and Certifications*

To guarantee high-quality performance and reliability, the GORE-TEX® Membrane complies with strict industry standards:

EN 343 Class 3:3

* + This certification covers the requirements for protective clothing designed to prevent water penetration in severe environmental conditions.
  + The product is subjected to rigorous assessments simulating prolonged exposure to water and harsh weather conditions.
  + Class 3:3 denotes excellent waterproofness and durability under constant water pressure.

*3. Key Technical Specifications*

Water Resistance

Water Column: 28,000 mm

* + This high-water column rating indicates the membrane's exceptional resistance to water penetration, ensuring effective protection in extreme rainfall or immersion conditions.

Breathability

RET (Resistance to Evaporative Heat Transfer): RET < 6

* + An RET value lower than 6 confirms the membrane’s outstanding breathability. This characteristic allows perspiration to escape rapidly while keeping external water away, ensuring thermal comfort during intense physical activities.

Material Composition

ePTFE Membrane:

* + Structure: The expanded PTFE (ePTFE) is a microporous material that creates a robust barrier against water while allowing moisture vapor to pass through.
  + Durability: Known for its high strength-to-weight ratio, the ePTFE membrane is durable yet ultralight, making it ideal for both performance and everyday protective gear.

*4. Testing Methodology*

The performance and durability of the GORE-TEX® Membrane have been verified through a series of standardized tests:

Water Resistance Testing (EN 343):

* + A water column test that measures the pressure resistance of the membrane, ensuring it meets or exceeds the 28,000 mm threshold.

Breathability Testing:

* + RET tests (Resistance to Evaporative Heat Transfer) are conducted to quantify the membrane’s ability to allow moisture vapor to escape, with a target of RET < 6.

Mechanical and Durability Assessments:

* + Additional tests evaluate resistance to abrasion, tensile strength, and durability under repeated environmental stress.

*5. Maintenance and Care Instructions*

To maintain the optimal performance of your GORE-TEX® Membrane, please adhere to the following care guidelines:

Washing:

* + Use a gentle, non-detergent cleaner designed for technical fabrics.
  + Machine wash at a maximum of 40 °C to preserve the integrity of the membrane.

Drying:

* + Air drying is recommended.
  + Avoid high-heat tumble drying, which can damage the membrane structure.

Storage:

* + Store the product in a cool, dry area away from direct sunlight.
  + Ensure that the fabric is completely dry before storage to prevent mold growth.

Inspection:

* + Regularly inspect your garment for signs of wear or damage, particularly after exposure to extreme conditions.
  + Minor damages should be addressed immediately by authorized repair centres to maintain waterproof and breathable performance.

*6. Contact Information*

For any questions regarding use or maintenance, please contact our customer service:

• Social Networks: (links available on our official website: tse-project.vercel.app)