

# Four Advantages of ZERO-TEX®



## Unique Ultra-Durable Manufacturing Method

This ultra-durable manufacturing method is Yamagin's proprietary production method. ZERO-TEX, which is lightweight, strong, durable, water-repellent, breathable, and moisture permeable, is a woven fabric made of polyester and cotton fibers using the ultra-durable manufacturing process

Even after the water-repellent treatment, the fabric remains breathable and moisture permeable.

In addition, the use of fibers of different thicknesses, such as shiny thin fibers and stiff thick fibers, makes this fabric very durable and strong, allowing for a wide variety of fabric variations

Because of its durability, it is widely used for uniforms.

Due to its fine texture, it is also ideal for apparel and outdoor clothing.

It can also be effectively used in medical and nursing care situations because of the virus protection properties of ZERO-TEX.



## ZERO-TEX Durable Water Repellent Finish

ZERO-TEX is a water-repellent fabric that lasts even after 100 washes thanks to the ultra-durable manufacturing method and Yamagin's unique durable water-repellent treatment.

ZERO-TEX combines water repellency with breathability and moisture permeability, which are usually contradictory to water repellency.

ZERO-TEX is also characterized by its extremely low electrostatic charge.

Efforts to Reduce Environmental Impact

ZERO-TEX uses a C6 PFOA-free water repellent that does not contain fluorinated organic compounds (FOCs).

FOCs have been used in water repellents, surface treatment agents, and coating agents.

However, their production and use have been gradually restricted in recent years as their harmfulness and accumulation properties have become clear. ZERO-TEX does not contain any such toxic substances and is a safe and harmless material. C0

water repellent, which does not contain any fluorine compounds, can be used upon request.

Please contact us if you wish to use ZERO-TEX material with C0 water repellent.



## Environmental Consideration



Since its establishment, Yamagin Co., Ltd. has been seeking to be at the forefront of sustainability activities. In keeping with the spirit of our slogan "For the Future," we will continue our efforts to further improve productivity and reduce our environmental impact.

The third generation ZERO-TEX, to be released in October 2022, will reduce CO2 emissions by an additional 52% compared with 2019.

This reduction is the total of many steps we have taken.

Emissions were cut by 26% by switching from purchasing power plant electricity to utilizing an in-house LPG gas cogeneration system, which is less environmentally hazardous.

The use of recycled polyester yarn made from recycled plastic bottles has resulted in an 8% reduction in CO2 emissions, and a further 18% reduction was achieved by dyeing polyester at the raw material stage and dyeing cotton at the yarn stage.

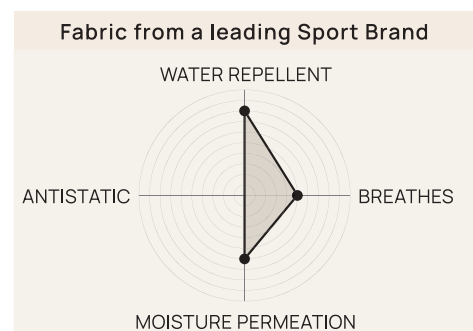
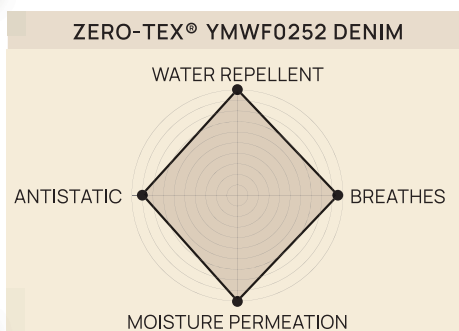
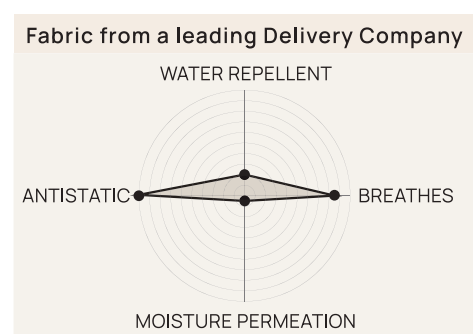
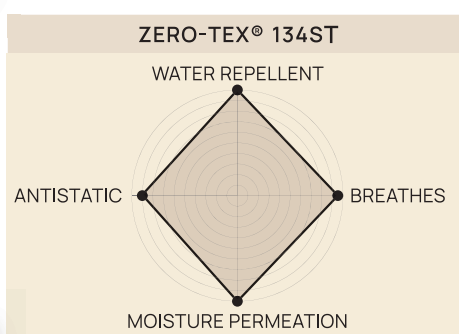
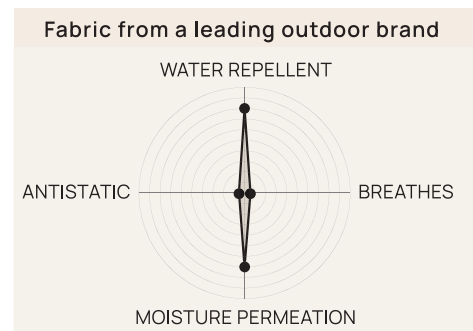
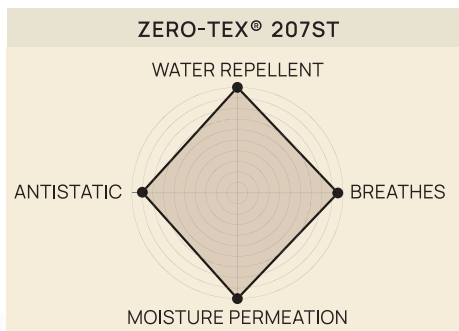
In response to water usage issues, we have reduced water consumption in the dyeing process by 70% (110 liters per kilogram of fabric), making a significant contribution to sustainable water resources.

ZERO-TEX is manufactured at PENFABRIC, a top OEKO-TEX factory that has acquired the MADE IN GREEN certification.

ZERO-TEX does not contain any restricted substances or plasticizers specified by RoHS (Directive 2015/863/EU) and REACH SVHC.

\*For inquiries regarding the current status of compliance and whether or not specific substances are contained, please contact us.

# Four Advantages of ZERO-TEX® Comparison with Other Companies



## ZERO-TEX® Features

■ Functional ★ Stress-free ▲ Safe ● Comfortable ◆ Economical ● Sustainable ■ Ecological

|   |  |  |  |  |   |
|---|--|--|--|--|---|
| <p>Uses environmentally friendly chemicals</p> <p><b>made in green</b><br/><b>OEKO-TEX®</b></p> | <p>Durable Water Repellency</p>            | <p>Breathability</p>   | <p>Antistatic</p>                              | <p>Stain Resistance</p>                    | <p>Cool Touch</p>                                 |
|   | Long-lasting water repellency              | Dry and comfortable to wear  | Reduces discomfort caused by rubbing           | Resistant to stains and easy stain removal | High thermal diffusivity to remove vaporized heat |
|   | JIS L 1092 (100 washes)                    | JIS L 1096 A   | JIS L 1094                                     | JIS L 1919 B                               | JIS L 1927  |
|   | ★▲●  | ★●■  | ★●■  | ★▲■  | ●▲■   |
|   | <p>UV Protection</p>                       | <p>Pollen Release</p>  | <p>Moisture Permeability</p>                   | <p>Easy Care</p>                           | <p>AAMI Level 2</p>                               |
|   | High UV protection even with white fabrics | Pollen does not easily stick to the fabric and can be easily wiped off | Reduces discomfort caused by heat and moisture | Easy to clean at home                      | Virus protection                                  |
|   | JIS L 1925                                 | QTEC Quality Standards   | JIS L 1099 B-1                                 | AAMI Level2 (100 washes)                   | AAMI Level2 (100 washes)                          |
|   | ●▲■  | ●▲■  | ●■◆■   | ◆■●  | ▲■■   |