

# TECH INSIGHT

**IBQ-MEC-514**

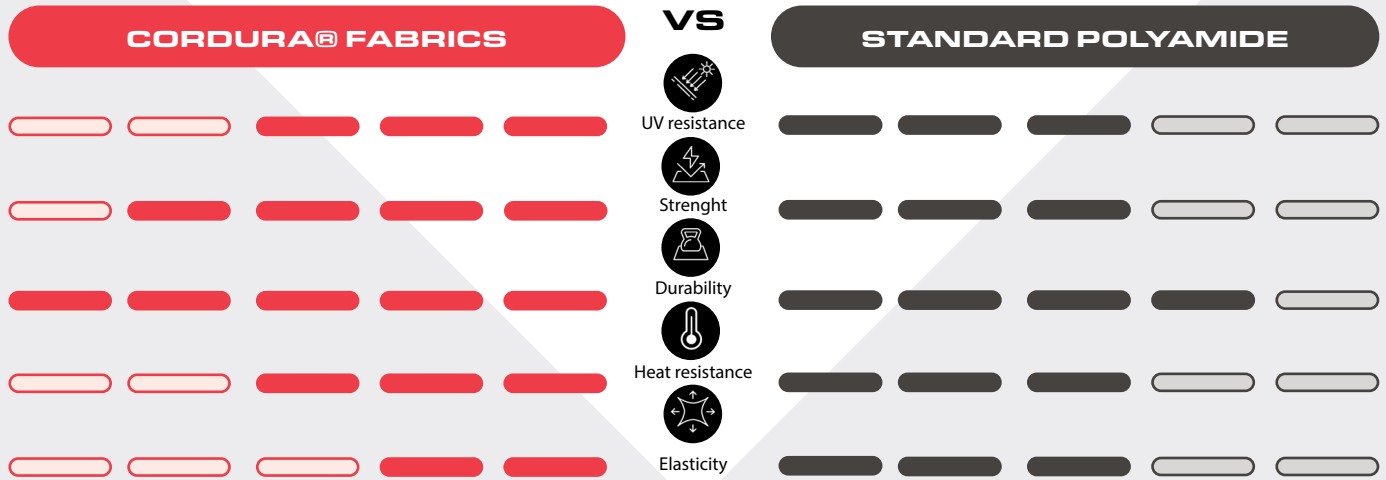
**CORDURA® DURABILITY  
WITH FREEDOM OF  
MOVEMENT**

**YOU DO. WE PROTECT.**

**IBQ®**  
TEXTILES PROTECTING LIVES

# THE TECHNOLOGY INSIDE IBQ-MEC-514

IBQ-MEC-514 is a high-performance CORDURA® stretch fabric engineered for demanding apparel and equipment applications. Its composition of 94% Polyamide CORDURA® and 6% Elastane Lycra® combines long-lasting mechanical durability with controlled stretch, delivering a smart balance between toughness, comfort and freedom of movement.



CORDURA® fabrics are engineered for toughness and long-lasting performance. Compared with standard polyamide, CORDURA®-based constructions better withstand scuffs, scrapes and intensive daily use. They also offer a higher thermal softening point, an important advantage where heat and friction are present simultaneously.

This makes CORDURA® especially relevant where fabric failure is not just an aesthetic concern but a performance and safety issue. In workwear, tactical apparel, outdoor gear, motorsport and reinforcement zones, the fabric must resist repeated mechanical stress while maintaining comfort and stability over time. When combined with elastane, CORDURA® also delivers the freedom of movement and ergonomic comfort that standard polyamide alone cannot consistently provide.

Standard polyamide fabrics are widely used in performance apparel because they are lightweight, versatile and affordable. They work well across a broad range of outdoor, sport and workwear applications.

However, in demanding environments where garments are subject to repeated abrasion, friction, tension and twisting, the fabric surface can degrade, affecting appearance and shortening service life. This is especially critical in high-wear areas such as knees, elbows, shoulders, seat zones, pockets and equipment contact points. In technical apparel, durability depends not just on the fibre but on yarn quality, fabric construction, weight and finishing. Standard polyamide can fall short when consistent protection over time is essential.

## BUILT FOR DURABILITY

Cordura® gives IBQ-MEC-514 its strong mechanical identity. The fabric is engineered for applications where abrasion resistance, tensile strength, and tear resistance are key performance requirements. In high exposure garments, the fabric surface is constantly subjected to friction from contact with the ground, tools, harnesses, backpacks, machinery, vehicles, and repeated body movement. Over time, these conditions can damage standard fabrics and reduce garment performance. IBQ-MEC-514 is designed to meet this challenge. Its Cordura® base helps the fabric maintain its resistance, structure, and appearance under repeated use, making it suitable both as a primary fabric and as a reinforcement material.

## DIFFERENT FINISHES, DIFFERENT APPLICATIONS

IBQ-MEC-514 brings together mechanical durability and freedom of movement in a single fabric. Built on a CORDURA® and Lycra® construction, it is engineered to protect in the most demanding conditions while moving with the wearer. The IBQ-MEC-514 family is available in different versions, allowing the same technical concept to be adapted to specific end uses and performance requirements.

**CORDURA® DURABILITY WITH COMFORT AND MOBILITY.**

## COMFORT AND MOBILITY

Durability alone is not enough in modern performance apparel. Garments also need to move with the body. By incorporating elastane into a CORDURA® polyamide base, IBQ-MEC-514 offers an ideal balance between toughness and mobility. The fabric maintains a sturdy, technical hand feel while providing controlled stretch and excellent recovery. This is particularly important in garments designed for active use, where the wearer requires protection without compromising freedom of movement. In high mobility areas such as the knees, elbows, and shoulders, the fabric's stretch reduces tension on the garment and enhances comfort during prolonged activity. In simple terms, IBQ-MEC-514 is not only strong enough to protect, but also flexible enough to allow the wearer to perform at their best.

- WR** PFAS-free water repellent for outdoor, workwear, tactical and equipment applications. Provides light moisture protection with comfort and durability.
- DWR** C6-based water and oil repellent for repeated outdoor use. Ideal for military and fire sector garments.
- CAM-DWR** Stretch performance fabric for camouflage and tactical applications, combining concealment with durability.
- JRS-WR** 3-layer waterproof, breathable laminated fabric offering water protection, thermal comfort and lasting durability.