Textile Effects

Comfortable protection
with PYROVATEX® flame retardant finish

Textile Competence
PYROVATEX®—the protection you need, the comfort you want

PYROVATEX® was introduced in the 1960s as a durable flame retardant product for cellulosic fibers. Continuous improvements have reflected changes in market requirements and environmental issues. From its introduction until today, however one thing has remained constant—PYROVATEX® offers the maximum combination of overall flame and heat protection and unsurpassed comfort in treated garments. PYROVATEX® has been used to treat more than 100 million square meters of fabric. Garments produced from these fabrics provide people around the world with life saving protection.

We deliver products to textile finishers, and also partnership and value to everyone in the supply chain.
PYROVATEX® delivers...
Garment comfort is essential for effective workwear. Wearing of these garments is usually accompanied by strenuous physical effort; therefore comfortable clothing is more likely to be used—and used properly.

It is no coincidence that cotton is the most widely used fiber in the world. Its inherent softness is enhanced by its ability to keep the wearer cool in hot climates, and warm in cold climates. Additionally, it offers a breathability that is far superior to that of synthetic fibres. PYROVATEX® treatment is not detrimental to the comfort of cotton. Some flame retardant finishes work by forming “films”, or complexes, on the surface of the garment, resulting in a stiffer handle. Fabrics treated with PYROVATEX® maintain their original softness.

PYROVATEX®
- treated fabrics offer the best overall flame protection available for cotton, as proved by comprehensive testing in line with international flame retardant standards.
- treated fabrics barely shrink when exposed to heat and flames, thereby ensuring that the skin is not exposed to hazardous conditions.
- treated cotton, unlike synthetics, will not melt in the presence of heat and flames. Melted cloth presents a risk to the wearer.
- treated fabrics afford excellent thermal protection when heat is an added danger.

Superior comfort

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Excellence in use

PYROVATEX®
- treated fabrics have outstanding durability to wash and wear, which assures long life of the clothing.
- finishes have negligible influence on fabric coloration and therefore preserve flexibility to meet specific color demands.
- treated fabrics have good compatibility with other treatments, permitting the creation of multifunctional garments.
- treated fabrics can also fulfill TEFLO® standards in providing a durable barrier against water, oil, and dirt.

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Oil industry

In the oil industry, FR garments often have to protect wearers under extreme climate conditions, such as in Alaska or the Middle-East Gulf region. This industry will remain one of the top worldwide segments for high quality FR clothing.

Additional benefits: oil and water repellency, resistance to static build-up

Chemical industry

The handling of chemicals in a production facility can represent a potential fire hazard; therefore, workers need to be protected. PYROVATEX®, in combination with chemical resistant/repellent finishes, has proved sufficiently protective.

Additional requirement: chemical resistance
Industries

Welding/metal industry

Flame protective workwear first became important in the metal industry. Workers in these industries need protection not only from heat and flames, but also from sparks and drops of molten metal.

**Additional benefits:** resistance to static build-up

Electrical industry

Flame protective workwear is becoming increasingly important to the electrical industry. Fabrics finished with PYROVATEX® surpass the requirements for this end use.

**Additional requirements:**
ARC test, ATP test, EBR test
Public Services
Military/police

The requirements for flame retardant uniforms for the armed forces or police vary, depending on local regulations. In addition, the FR requirements must not interfere with other special requirements such as infrared emission, light fastness, oil and water repellency or camouflage colors.

Additional benefits: oil and water repellency

Technical support institutions

Given the wide range of operational assignments entailed (backing up fire fighters and police, assistance in the aftermath of natural disasters), high all-round protection is called for.

Additional benefits: water repellency, resistance to static build-up

Fire fighting

Proper protection against heat and flames is essential for fire fighters. When entering a dangerous environment, the fire fighter must be confident that he/she has the best protection available.

Additional benefits: water repellency, resistance to static build-up
PYROVATEX®

test results
ECO-toxology

...in use
Dermatological tests indicate that PYROVATEX® finished fabrics do not irritate the skin. Tests on saliva and sweat yield no evidence of harmful effects on humans.

...in the event of a fire
Analysis of the combustion gases by different methods showed no significant differences versus untreated cotton.

...disposal
The decomposition of cotton is not influenced by treatment with PYROVATEX®.

Free formaldehyde
The washing-off process undergone by PYROVATEX® finished fabrics results in very low free formaldehyde levels. (Japan Law 112: < 75 ppm)

PYROVATEX® treated fabrics meet OEKO-TEX STANDARD 100 requirements (e.g. product class II, direct skin contact).
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9600002e—May 2007, Printed in Germany.