

Pyrolon™ XT



Serged (stitched) overlapped seams



TYPE 5



TYPE 6



EN 1073-2



EN 1149-1



EN ISO 14116 INDEX 100



Flame retardant Type 5 & 6 breathable coverall

- Pyrolon garments meet the requirements of EN 14116 (Index 1) for garment for protection against flames and heat.
- Includes nylon scrim which improves strength and durability..
- Fabric will not ignite, chars at low temperature and unlike standard disposables does not continue burning after the ignition source is withdrawn.
- Can safely be used over thermal protective garments without compromising thermal protection.
- Note that Pyrolon™ XT fabric will not ignite but is designed to wear OVER thermal protective garments and will not provide heat protection if worn alone.
- Intrinsic anti-static properties with very low surface resistance; anti-static does not wear off in use like standard disposables.
- Lakeland "Super-B" ergonomic styling – unique combination of three design elements to optimise fit, durability and freedom of movement.
- Three piece hood for rounder head shape and greater comfort.
- Inset sleeves – torso shaped to body to maximise freedom of movement and negate the need for thumbloops.
- Two piece crotch gusset – enhances freedom of movement and reduced crotch splitting.

Physical Properties

Property	EN Std	Pyrolon™ Plus 2	Pyrolon™ XT	FR SMS Brand A	FR SMS Brand B
		CE Class	CE Class	CE Class	CE Class
Abrasion Resistance	EN 530	3	2	2	1
Flex Cracking	ISO 7854	6	6	6	5
Trapezoidal Tear	ISO 9073	2	4/3	2	1
Tensile Strength	EN 13934	2/1	3/2	1	1
Puncture Resistance	EN 863	2	2	1	1
Burst Strength	EN 13938	3	2	n/a	n/a
Seam Strength	EN 13935	2	3	3	2

Chemical Repellency and Penetration EN 6530

Chemical	Pyrolon™ Plus 2		Pyrolon™ XT		FR SMS Brand A		FR SMS Brand B	
	R	P	R	P	R	P	R	P
Sulphuric Acid 30% CAS No. 67-64-1	2	3	3	3	3	3	3	3
Sodium Hydroxide CAS No. 1310-73-2	3	3	3	2	3	3	3	3
O-Xylene CAS No. 75-15-0	NT	NT	NT	NT	n/a	n/a	n/a	n/a
Butanol CAS No. 75-09-2	NT	NT	NT	NT	n/a	n/a	n/a	n/a

Note:-

Columns 3 and 4 contain comparative data for two commonly available FR SMS-based garment brands. The tests show that in most cases the Lakeland Pyrolon™ options feature superior properties.

However, whereas thermal mannequin testing to show predicted body burn when worn over a thermal protecting EN 11612 garment has been conducted on Pyrolon™, no such testing is available from the manufacturers of Brands A and B. Lakeland has conducted such testing for comparison purposes. The results are shown below:-

Thermal Mannequin Testing

	FSPE	Standard SMS	FR SMS	Pyrolon™ Plus 2	Pyrolon™ XT
Total % predicted body burn	23.9%	20.5%	19.6%	7.4%	8.2%
2nd degree burns	15.6%	12.8%	14.7%	7.4%	8.2%
3rd degree burns	8.3%	7.7%	4.9%	0%	0%

Note:-

1. The predicted body burn performance shows little difference between FSPE, Standard SMS and FR SMS with total body burn being close to 20% and including 3rd degree body burns of 5 to 8%.
2. The total predicted body burn for Pyrolon™ products is much lower at 7 to 8% with no 3rd degree burns apparent.
3. This proves both that Pyrolon™ products show a superior FR performance when worn over EN 11612 protective garments and that the additional cost of FR SMS garments over Standard SMS garments results in very little improvement in FR performance.

Pyrolon™ XT Styles



Style code 428
Coverall with elasticated hood, cuffs, waist & ankles.

Sizes: S - XXXL



Style code 101
Lab coat with two hip pockets. 4 stud fastening.

Size: M - XL



Style code 514
Jacket with elasticated cuffs.

Sizes: S - XXXL



Style code 016
Trousers with elasticated waist.

Sizes: S - XXXL



Style code 019
Rear entry gown with elasticated cuffs.

Size: M - XL



Style code 022NS
Overshoes with anti-slip soles.

Size: One size



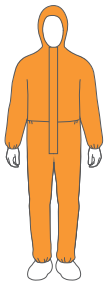
Style code 023NS
Overshoes with anti-slip soles and ties.

Size: One size

Available in: Pale blue

Not all styles are available from European stock in this fabric. Please contact our sales office for information on stock items.

Why use Pyrolon™?



When should Pyrolon™ protective clothing be used?

Why do standard disposable suits compromise thermal protection?

EN 14116 and Flame and Heat Protection

Many applications require both thermal protection **and** chemical protection. How do you provide both?

Currently users often wear a Thermal Protective Garment (TPG) for flame protection and wear a standard disposable suit OVER it for chemical protection.

Why?

This creates a HAZARD!

Standard disposable suit fabrics are based on polypropylene/polyethylene and in contact with flames will ignite and burn

Being thermoplastic they will melt and drip, adhering to the TPG fabric below, transferring heat energy to the skin beneath and to other surfaces, thus potentially spreading the fire.

In a flash fire situation this will dramatically increase the heat energy contacting the skin and thus the incidence of body burn.

Even in the case of contact with a small flame, a standard disposable suit fabric may ignite and cause burns.

Wearing a standard chemical suit over a TPG can dramatically compromise thermal protection.



EN ISO 14116
INDEX 1/0/0

EN Standard - EN 14116
Protection against Heat and Flame
Limited Flame Spread

This standard measures the tendency of a fabric to ignite and propagate a flame, using the vertical flame test method EN 15025 which applies a flame to the centre or bottom edge of a fabric sample. Index 1 requires that any flame should not propagate

to the top or sides of the fabric, that there should be no flaming debris or drips and that there should be no spreading afterglow once burning has ceased. It does however allow the flame contact to form a hole in the fabric.

Thus certification to EN 14116 Index 1 indicates a fabric that will not ignite in contact with a flame.

However it provides NO protection against flame and **should not be worn next to the skin.**



Lakeland Pyrolon™ garments use a unique, viscose-based fabric which will not ignite.

(certified to EN 14116 Index 1)

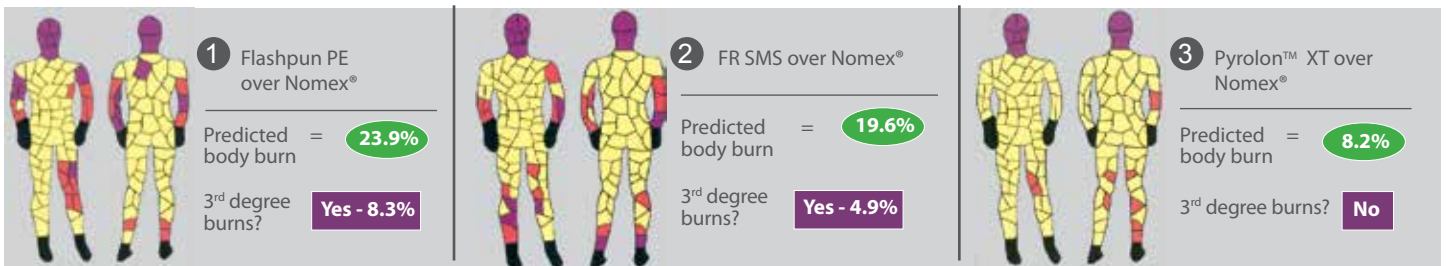
However, Pyrolon™ TPCR offers full thermal protection to EN 11612 and can REPLACE a standard thermal protective garment.

Thermal Mannequin Testing: Predicted Body Burn

Thermal Mannequin Testing is optional in EN 11612 for thermal protective garments and provides a method of predicting percentage body burn in a flash fire situation and therefore the effectiveness of the protection provides.

Below are three body maps using different disposables worn over a TPG.

1. A Flashpun PE disposable coverall
2. An FR SMS disposable coverall
3. A Pyrolon™ XT coverall



The testing shows that both standard disposables such as Flashpun and FR SMS garments result in higher predicted body burn with very little difference. Only Pyrolon™ garments result in a dramatic reduction in predicted body burn.