

# MicroMax® NS TRINE



Serged (stitched) overlapped seams



Type 5 & 6 protective coverall with protective rear sleeve for harness lanyard.

- Allows harness and lanyard to be worn inside coverall.
- Protects harness and lanyard from damaging liquids, paints and chemicals - reduces costs.
- Lanyard sleeve folds away neatly in rear pouch when not in use.
- Velcro fastened lanyard sleeve for easy fitting.
- Tested at SATRA fall-arrest rig: garment remains intact when a fall incident occurs, maintaining protection for wearer. (See video – use QR code or URL below)
- High quality microporous film laminate fabric - soft, flexible and comfortable to wear.
- Coverall with elasticated hood, waist, wrists and ankles. Fold away lanyard sleeve to rear.
- Improved Super-B style coverall: superior fit, wearability and durability.
- Three-piece hood, inset sleeves and diamond crotch gusset results in best fitting garment on the market.

### Physical Properties

Property	EN Std	MicroMax® NS /TS	MicroMax®	SafeGard® GP	SafeGard® 76	Flashspun PE
		CE Class				
Abrasion Resistance	EN 530	2	1	2	2	2
Flex Cracking	ISO 7854	4	5	5	5	6
Trapezoidal Tear	ISO 9073	2	3	3	3	1
Tensile Strength	EN 13934	1	1	1	1	1
Puncture Resistance	EN 863	1	2	1	1	2
Anti-static (Surface Resistance)	EN 1149-1	Pass* (<2.5 x 10 <sup>9</sup> Ω)				
Seam Strength	EN 13935-2	3	3	3	3	3

\* According to EN 1149-5

### Chemical Repellency and Penetration EN 6530

Chemical	MicroMax® NS/TS		MicroMax®		SafeGard® GP		SafeGard® 76		Flashspun PE	
	R	P	R	P	R	P	R	P	R	P
Sulphuric Acid 30% CAS No. 67-64-1	3	3	3	3	3	3	3	3	3	3
Sodium Hydroxide CAS No. 1310-73-2	3	3	3	3	3	3	3	3	3	3
O-Xylene CAS No. 75-15-0	3	2	3	3	NT	NT	NT	NT	1	1
Butanol CAS No. 75-09-2	3	2	3	3	NT	NT	NT	NT	2	1

### Breathability - measured by air permeability and moisture vapour transmission rate (MVTR)

	MicroMax® NS/TS	MicroMax®	SafeGard® GP	SafeGard® 76	Flashspun PE	Cotton T-shirt
Air permeability cubic feet/minute (cfm)	<0.5	<0.5	40	40	~3.3	180
MVTR	119.3	NT	NT	NT	111.2	NT

### Infectious Agent / Biological Hazard Protection

Tested according to EN 14126. This consists of four different tests to assess protection against different forms of classification. Note these tests are on fabric only. We would always recommend a garment with sealed seams such as MicroMax® TS for protection against infectious agent hazards.

Test Description	Test No.	MicroMax® NS/TS	SafeGard® GP/76	Flashspun PE
Protection against blood and body fluids	ISO 16604:2004	6 (max is 6)	Not recommended	<1
Protection against biologically contaminated aerosols	ISO 22611:2003	3 (max is 3)	Not recommended	1
Protection against dry microbial contact	ISO 22612:2005	3 (max is 3)	Not recommended	1
Protection against mechanical contact with substances containing contaminated liquids	EN 14126:2003 Annex A	6 (max is 6)	Not recommended	1

## MicroMax® NS TRINE Style



Style Code: EMN428WH

Coverall with elasticated hood, waist, wrists and ankles. Rear sleeve for fall arrest harness lanyard.

Sizes: SM - 3X

Available in:  White

MicroMAX® NS TRINE has been tested at the SATRA fall-arrest rig to ensure it stays intact in a fall incident. Use the QR link to watch the video.



[www.lakeland.com/europe/blog/cat/videos/post/mmnstrine/](http://www.lakeland.com/europe/blog/cat/videos/post/mmnstrine/)

Air permeability is a measure of the fabric's tendency to allow air to pass through and is the best indicator of comfort. The higher the breathability, the better the comfort for the wearer. The results show that fabrics such as Microporous films (MicroMax®) and flashspun polyethylene have very low and very similar levels of breathability; both are as close to zero as makes little practical difference. By contrast SMS fabric (SafeGard) has more than ten times the breathability and a standard cotton T-shirt has four times that of an SMS fabric.

# Clothing For Protection against Type 5 and 6 Hazards

## Essential Guide to Garment Selection

There are many different brands of Type 5 & 6 coveralls in the market - yet there are only three essential types of fabrics used to make them. So which fabric is the best choice? That depends on the application and the balance to be achieved between protection, comfort and durability.

 <p><b>Type 5 EN 13982</b> protection against hazardous dry particles</p>	 <p><b>EN 1073-2</b> protection against dust contaminated with radiation</p>	 <p><b>Type 6 EN 13034</b> protection against reduced/light liquid sprays and splashes</p>
<p><b>Type 5- Hazardous Dry Particles</b></p> <ul style="list-style-type: none"> <li>- Spray cabin filled with dust</li> <li>- Subject performs exercise on treadmill</li> <li>- 3 particle counters <i>inside</i> the suit</li> <li>- Particle "Inward leakage" calculated</li> <li>- Recorded as % of inward leakage (TIL)</li> </ul> 	<p><b>EN 1073-2</b> testing is a variation of the standard Type 5 test.</p>	<p><b>Type 6 - Reduced Liquid (aerosol) Spray</b></p> <ul style="list-style-type: none"> <li>- Four nozzles - aerosol spray of liquid</li> <li>- Subject rotates on turntable</li> <li>- Inside absorbent suit checked for penetration</li> <li>- Pass or Fail according to test criteria</li> </ul> 

Three types of fabric are used to make all Type 5 & 6 garments on the market.

 <p>Flashspun Polyethylene (FSPE)</p>	 <p>SMS/SMMS - Spunbond-Meltblown-Spunbond <b>Lakeland SafeGard™</b></p>	 <p>Microporous Film Laminate (MPFL) <b>Lakeland MicroMax®</b></p>
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All Type 5 & 6 garments on the market are one of these or variations of these.

## How do these fabrics compare? Three important factors can be considered:

<p><b>1. Liquid Protection</b></p>	<p>Type 6 CE testing includes liquid repellency and penetration tests against four chemicals. In two of the four chemicals, Lakeland MicroMax® options achieve superior results than the closest alternative.</p>	<p>CE testing for Infectious Agents to EN 14126 includes tests against four types of contamination. In all four tests MicroMax® options achieve superior results and the highest class compared to the FSPE alternative, which is unclassified in the critical ISO 16604 test.</p>
<p><b>2. Physical Properties</b></p>	<p>Testing as part of CE certification allows comparison of strength properties: abrasion - tensile strength - trapezoidal tear etc. In comparisons of the three fabric types Lakeland SafeGard™ or MicroMax® options offer a superior choice compared to the alternative FSPE option in most cases.</p>	
<p><b>3. Comfort and Breathability</b></p>	<p>Comfort is primarily a result of air permeability. Independent testing indicates the difference between MicroMax® and FSPE is minimal and close to zero. Both have very low air permeability. The Lakeland SafeGard™ option has an air permeability over 10 times that of the alternatives and is the superior choice for a comfortable garment.</p>	<p>A common sense approach and simple 'home' tests clearly confirm both the low air-permeability of MicroMax® and FSPE and the superior air-permeability of SafeGard™. <b>Where protection and comfort are required, Lakeland Cool Suit® options provide the best of both MicroMax® and SafeGard™ fabrics and may be the best choice available.</b></p>
<p>Type 5 and 6 garments can be selected on the basis of a combination of three factors:</p> <ol style="list-style-type: none"> <li>1. Protection</li> <li>2. Physical Properties</li> <li>3. Comfort and Breathability</li> </ol>		<p>For all three factors, Lakeland garments provide the best choice ...</p>

Use the QR Code or visit: <https://promo.lakeland.com/europe/guide-to-type-5-and-6-protective-coveralls> to download our complete **Guide to Type 5 & 6 Coverall selection**



\* Competitor brand results are from competitors' own websites and were correct at the time of publication. Users are recommended to check up to date information with competitors before making any assessment based on specific chemicals. Other chemical test results may be available from competitors.