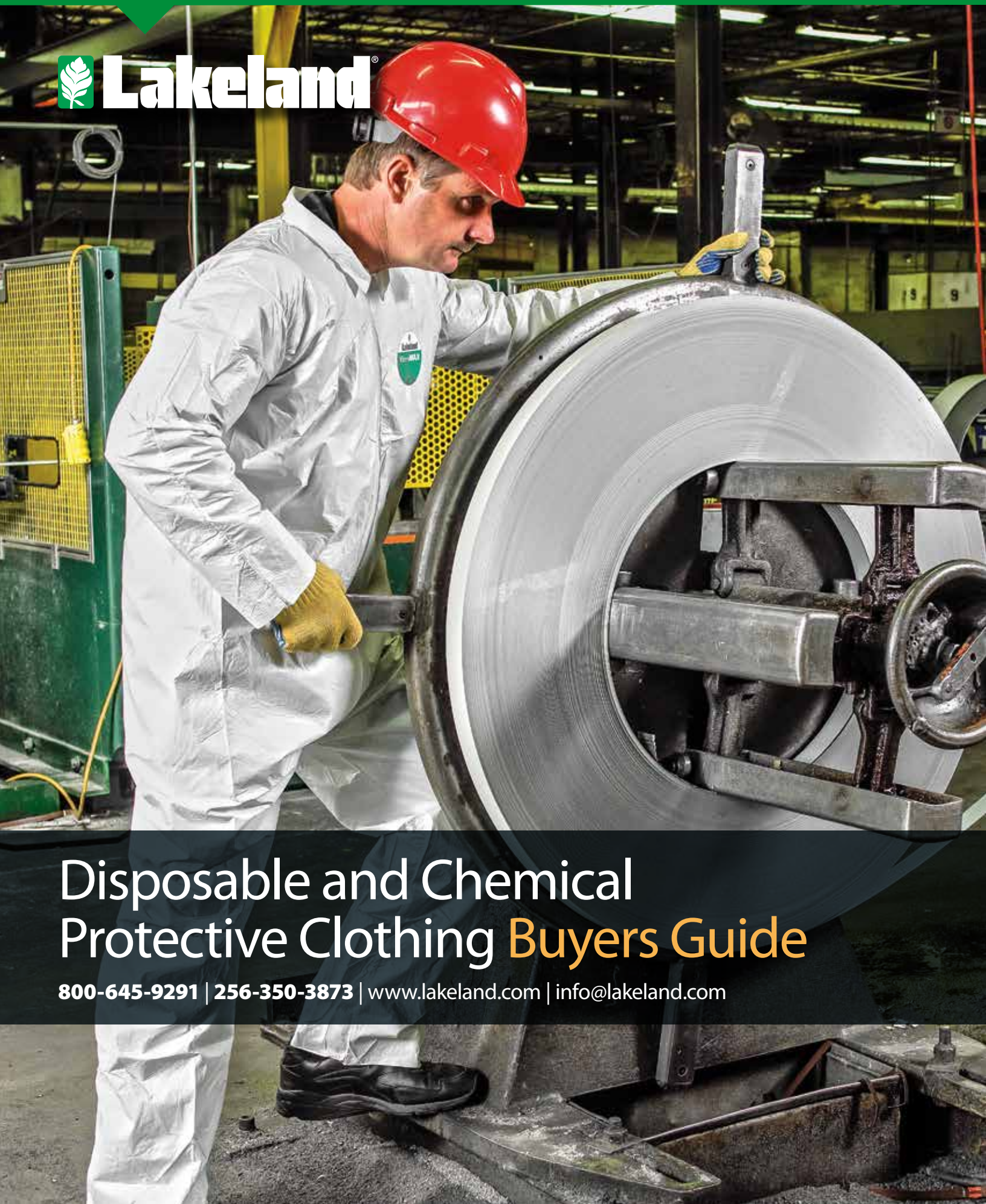

Lakeland®

Disposable and Chemical Protective Clothing Buyers Guide

800-645-9291 | **256-350-3873** | www.lakeland.com | info@lakeland.com

Why Choose Lakeland?

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Lakeland delivers the best, most innovative Protective Clothing products and fabric choices available anywhere in the world... and we're stepping on the gas!

Broadest range of products and fabrics

From Disposables to Chemical, Reflective to Hand and Arm, Flame/Arc Flash Resistant and Fire Service/EMS, no one else in the Protective Apparel Industry can offer such comprehensive product and fabric choices- or the expertise to guide you. All under one roof.

Investing for growth – to serve and protect you better

We're doubling our sales and support personnel, R&D and product development efforts, upgrading our systems, and streamlining our operations . You will see the difference.

World-wide presence and growth

Lakeland International is growing rapidly, with production and sales operations in more than 40 countries. So we can bring you the best in fabrics and innovations the world has to offer, and technical expertise for wherever you do business.

Know the maker - we manufacture our own products

Lakeland protects people. It is our core business. Unlike our competitors, we don't use contractors. We make all our own apparel, so we have maximum control over quality and delivery.

For most contractors, protective clothing is only a portion of their business, and they lack our expertise and focus on protecting the end user- whereas that is what we are all about. We design the fabric, we make the garment, we inspect it, we ship it. And you know who to call.

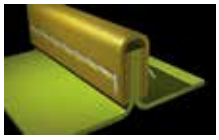
Let us help you protect your people, and grow with us!

Lakeland Brand Seams and Protection Levels

Serged Seam

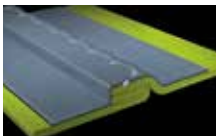
A serged seam joins two pieces of material with a thread that interlocks. This is an economical stitching method for general applications. This stitching method is generally not used for chemical protective clothing. It is more commonly found on disposable clothing where dry particulates are a concern.

Bound Seam



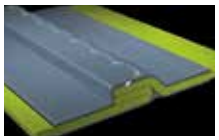
A bound seam joins two pieces of material with an overlay of similar material and is chain stitched through all of the layers for a clean finished edge. This provides increased holdout of liquids and dry particulates.

Heat Sealed Seam



A heat sealed seam is sewn and then sealed with a heat activated tape. This method provides liquid proof seams, and is especially useful for Level A and B chemical protective clothing.

Heat Sealed Plus Seam



This is the ultimate and strongest seam that Lakeland offers. The seam is sewn and then heat sealed on the outside and inside to offer the highest strength and chemical resistance.

Product Seam Availability

Product	Serged Seam	Bound Seams	Heat Sealed Seams
MicroMax® NS	●		
MicroMax® NS Cool Suit	●		
MicroMax®	●		
MicroMax® HBF	●		
SafeGard® SMS	●		
Economy SMS	●		
Pyolon® Plus 2	●		
Pyrolon® XT	●		
ZoneGard® Polypropylene	●		
Pyrolon® CRFR			●
ChemMax® 1	●	●	●
ChemMax® 2		●	●
ChemMax® 3			●
ChemMax® 4			●
Interceptor®			●

Product Applications

Product Applications	General Protection							Aerosol/Spray				Chemical Splash			Hazmat			Critical Environment / Biohazard	
	Dirt, Oil and Grease	Hazardous Dry Particulate	Non-Hazardous Liquids	Welding, Cutting and Grinding	Non-Hazardous Liquids	Paint, Hazardous Liquids	Dry Particles	Flammable Environment	Low Exposure, Low Risk	High Exposure, High Risk	Flammable Liquids	Hazmat, NFPA Certified	Hazmat, Maritime	Hazmat, Non Certified	Paint Booth	Bloodborne Pathogens	Waste Water Treatment	Flash Fire Chemical
MicroMax® NS	●	●	●		●	●	●		●						●	●	●	
MicroMax® NS Cool Suit	●	●	●		●	●	●											
MicroMax®	●	●	●		●	●	●		●						●	●	●	
MicroMax® HBF	●	●	●		●	●	●		●						●	●	●	
SafeGard® SMS	●	●	●		●	●	●											
Economy SMS	●	●			●	●	●											
Pyolon® Plus 2 *	●	●		●		●	●	●										●
Pyrolon® XT *	●	●		●		●	●	●										●
ZoneGard® Polypropylene	●				●													
Pyrolon® CRFR *	●	●	●	●	●	●	●	●	●	●	●			●				●
ChemMax® 1		●	●		●	●	●		●	●				●	●	●	●	
ChemMax® 2					●	●	●		●	●				●	●	●	●	
ChemMax® 3						●				●		●	●	●		●	●	
ChemMax® 4														●		●	●	
Interceptor® **										●		●	●	●				●

* Must be worn over thermally protective clothing, such as fire retardant cottons, aramids or mono acrylics.
** Interceptor meets the requirements of NFPA 1991 limited flash fire for escape only option.

MicroMax® NS

Microporous protection from dirt, grease, grime and light chemical splash!

This line of general purpose protective clothing can be used in work environments where hazardous or non-hazardous contaminants may be present. Very economical and lightweight, MicroMax® NS features high MVTR and is breathable for worker comfort. MicroMax® NS is strong, wet or dry, perfect for work environments where dirt, grime, splashes and spills are present.

MicroMax® NS Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	1.55 oz/y^2
Grab Tensile MD	ASTM D5034	lbs.	22.0 lbs.
Grab Tensile XD	ASTM D5034	lbs.	14.0 lbs.
Trapezoidal Tear MD	ASTM D1117	lbs.	9.0 lbs.
Trapezoidal Tear CD	ASTM D1117	lbs.	5.8 lbs.
Ball Burst	ASTM D3787	lbs.	19.0 lbs.
Air Permeability	ASTM D737	cfm	<0.562 cfm/ft^2
Surface Resistivity	EN1149-5:2006	Ω	Pass

MicroMax® NS ASTM F903 Penetration Data

Chemical Tested	Concentration %	Test Time – Minutes	Test Results
Diazinon	100%	60	Pass
Motor Oil-40 wt.	100%	60	Pass
Bleach-household	100%	60	Pass
Isocyanate Based Paint	100%	60	Pass
Sodium Hydroxide	50%	60	Pass
Sodium Hyperchlorite	10%	60	Pass
Blood	Challenge Fluid Liter – 3.20 x 108 (PFU/mL)	Assay Results PFU/mL <1	Pass

Labcoat
CTL101
- Snap closure
- 2 pockets
- Long sleeve

Sizes: S – 5X
Case Pack: 30

Labcoat
CTL104
- Snap closure
- 2 pockets
- Long sleeve
- Elastic wrists

Sizes: S – 5X
Case Pack: 30

Labcoat
CTL112
- Snap closure
- No pockets
- Long sleeve
- Elastic wrists

Sizes: S – 5X
Case Pack: 30

Labcoat
CTL140
- Snap closure
- No pockets
- Long sleeves.

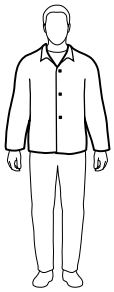
Sizes: S – 5X
Case Pack: 30

Frock
CTL190
- Mandarin collar
- 5 snaps
- No pockets
- Elastic wrists

Sizes: S – 5X
Case Pack: 30

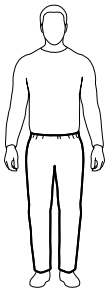
Frock
CTL191
- Mandarin collar
- Zipper closure
- No pockets
- Elastic wrists

Sizes: S – 5X
Case Pack: 25



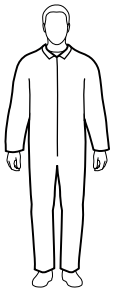
Shirt
CTL201
- Snap closure
- Long sleeves

Sizes: S – 5X
Case Pack: 50



Pants
CTL301
- Elastic waist

Sizes: S – 5X
Case Pack: 50



Coverall
CTL412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall
CTL414
- Zipper closure
- Attached hood
- Boots
- Elastic wrists

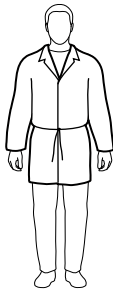
Sizes: S – 5X
Case Pack: 25

Coverall
CTL417
- Zipper closure
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

Coverall
CTL428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

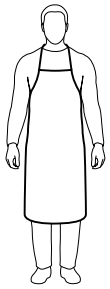


Smock
CTL501
- Long sleeves
- Attached ties

Sizes: S – 5X
Case Pack: 50

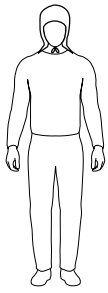
Apron
CTL601
- Sewn ties

Sizes: 28"w x 36"l
Case Pack: 100



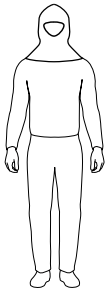
Apron
CTL603
- Sewn ties

Sizes: 28"w x 44"l
Case Pack: 100



Hood
CTL701
- Drawstring closure
- One size

Case Pack: 250

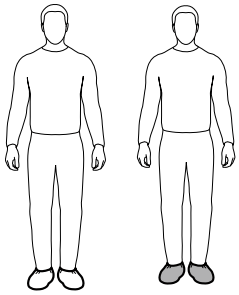


Hood
CTL713
- Elastic face
- Covers shoulders
- One size

Case Pack: 250

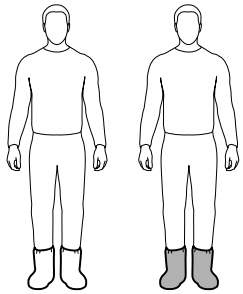
Sleeve
CTL850
- Elastic ends

Sizes: 18" length
Case Pack: 100 pair



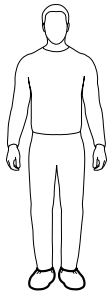
Shoe Cover
CTL901
901NS (non-skid)
- Elastic ankles
- Style 901 – standard version
- Style 901NS – gray non-skid version

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair



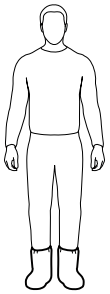
Boot Cover
CTL903
903NS (non-skid)
- Elastic top
- 17" high
- Style 903 – standard version
- Style 903NS – gray non-skid version

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair



Shoe Cover
CTL904
- Vinyl sole

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair



Boot Cover
CTL905
- Elastic top
- 17" high
- Vinyl sole

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair

MicroMax® NS Cool Suit

A breathable back panel makes the MicroMax® NS Cool Suit ideal for warmer work environments!

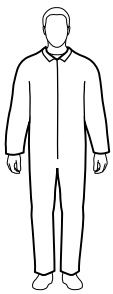
Like the MicroMax® NS coverall, the MicroMax® NS Cool Suit™ protects against dirt, grease, spills and contaminants and features increased breathability with an added SMS back panel. A superb pattern design and an elastic back waist offer improved comfort and fit. Front and sides made of microporous film on a polypropylene substrate provide barrier protection and a flap cover over the zipper protects against splashes. The MicroMax® NS Cool Suit breathable back panel offers a SMS particulate barrier. Stay cool while protecting yourself with the MicroMax® NS Cool Suit™.

MicroMAX® NS Cool Suit Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	1.85 oz/y^2
Strip Tensile MD	ASTM D5035	lbs.	11.3 lbs.
Strip Tensile XD	ASTM D5035	lbs.	6 lbs.
Tensile Strength MD	ASTM D5034	lbs.	24.4 lbs.
Tensile Strength XD	ASTM D5034	lbs.	16.2 lbs.
Trap/Tear MD	ASTM D1117	lbs.	10.8 lbs.
Trap/Tear XD	ASTM D1117	lbs.	5.4 lbs.
Ball Burst	ASTM 3787	lbs.	25.1 lbs.
Taber Abrasion	ASTM 3884	cycles	1062 cycles
Mocon-Breathability			5031
Air Permeability	ASTM D737	cfm/ft2	<0.562
Surface Resistivity	ASTM D257		>1010
Hydrostatic Resistance	ASTM 4157	cfm	127+
Flammability Pass		lbs.	16 cfr 1610 cii

MicroMax® NS Cool Suit ASTM F903 Penetration Data

Chemical Tested	Concentration %	Test Time – Minutes	Test Results
Diazinon	100%	60	Pass
Motor Oil-40 wt.	100%	60	Pass
Bleach-household	100%	60	Pass
Isocyanate Based Paint	100%	60	Pass
Sodium Hydroxide	50%	60	Pass
Sodium Hyperchlorite	10%	60	Pass
Blood	Challenge Fluid Liter – 3.20 x 108 (PFU/mL)	Assay Results PFU/mL <1	Pass



Coverall COL412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall COL428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

The MicroMax® NS Cool Suit breathable back panel offers a SMS particulate barrier

MicroMax®

Superior microporous protection at a very affordable cost!

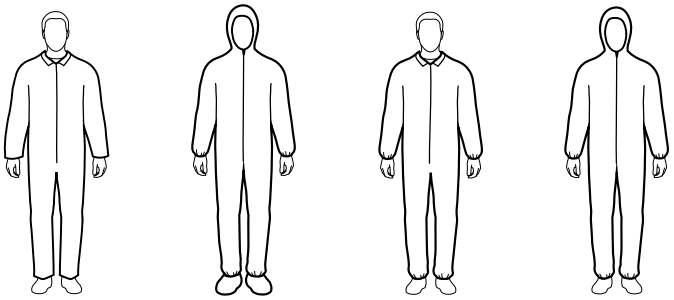
MicroMax® from Lakeland Industries brings the most advanced microporous technology to the protective clothing market yet. This line of general purpose protective clothing can be used in work environments where hazardous or non-hazardous contaminants may be present, as well as non-hazardous environments where dirt, grime, splashes and spills are occurring. The MicroMax® fabric is comprised of a microporous film with a polyester ripstop scrim between the film and substrate that gives the material additional strength. Tough, can-do protection at a price that is sure to agree with your budget.

MicroMax® Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	2.10 oz/y^2
Grab Tensile MD	ASTM D5034	lbs.	32.4 lbs.
Grab Tensile XD	ASTM D5034	lbs.	32.6 lbs.
Trapezoidal Tear MD	ASTM D5733	lbs.	5.1 lbs.
Trapezoidal Tear CD	ASTM D5733	lbs.	6.2 lbs.
Surface Resistivity	EN1149-5:2006	Ω	Pass

MicroMax® ASTM F903 Penetration Data

Chemical Tested	Concentration %	Test Time – Minutes	Test Results
Diazinon	100%	60	Pass
Motor Oil-40 wt.	100%	60	Pass
Bleach-household	100%	60	Pass
Isocyanate Based Paint	100%	60	Pass
Sodium Hydroxide	50%	60	Pass
Sodium Hyperchlorite	10%	60	Pass
Blood	Challenge Fluid Liter – 3.20 x 108 (PFU/mL)	Assay Results PFU/mL <1	Pass



Coverall TG412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall TG414
- Zipper closure
- Attached hood
- Boots
- Elastic wrists

Sizes: S – 5X
Case Pack: 25

Coverall TG417
- Zipper closure
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

Coverall TG428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

MicroMax® HBF

Get barrier protection and wearer comfort with new MicroMax® HBF!

MicroMax® HBF can be used in work environments where hazardous or non-hazardous contaminants may be present. HBF brings cutting-edge film structures to the protective apparel market. Each of its three layers work together to improve barrier performance, comfort, and durability. The result is a fabric with superior dry particle and light liquid splash barrier and comfort for the wearer.

MicroMax® HBF Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	2.7 oz/y^2
Grab Tensile MD	ASTM D5304	lbs.	22.12 lbs.
Grab Tensile XD	ASTM D5034	lbs.	36.08 lbs.
Trapezoidal Tear MD	ASTM D5733	lbs.	13.38 lbs.
Trapezoidal Tear CD	ASTM D5733	lbs.	23.20 lbs.
Ball Burst	ASTM D3787	lbs.	32.60 lbs
Surface Resistivity	EN1149-5:2006	Ω	Pass

MicroMax® HBF ASTM F903 Penetration Data

Chemical Tested	Concentration %	Test Time – Minutes	Test Results
Diazinon	100%	60	Pass
Motor Oil-40 wt.	100%	60	Pass
Bleach-household	100%	60	Pass
Isocyanate Based Paint	100%	60	Pass
Sodium Hydroxide	50%	60	Pass
Sodium Hyperchlorite	10%	60	Pass
Blood	Challenge Fluid Liter – 3.20 x 108 (PFU/mL)	Assay Results PFU/mL <1	Pass

Coverall HBF412

- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall HBF428

- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

ZoneGard® Polypropylene

Serged Seams

Dry Particulate

ZoneGard® – Cool clothing for Grimey Sites.

Lakeland's line of breathable ZoneGard® protective wear are appropriate for use in work environments where hazardous or non-hazardous contaminants may be present. Their porous construction accounts for a "breathability" that makes them cool and comfortable while offering protection to those who must work around constant dirt and grime. Economical and disposable, these Lakeland garments and accessories come in a range of styles and sizes.

ZoneGard® Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	1.25 oz/y^2

Labcoat
C2101
- Snap closure
- 2 pockets
- Long sleeve

Sizes: S – 5X
Case Pack: 30

Labcoat
C2140
- Snap closure
- No pockets
- Long sleeves.

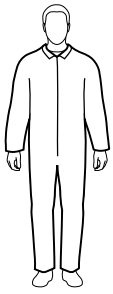
Sizes: S – 5X
Case Pack: 30

Shirt
C2201
- Snap closure
- Long sleeves

Sizes: S – 5X
Case Pack: 50

Pants
C2301
- Elastic waist

Sizes: S – 5X
Case Pack: 50



Coverall
C2412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall
C2414
- Zipper closure
- Attached hood
- Boots
- Elastic wrists

Sizes: S – 5X
Case Pack: 25

Coverall
C2417
- Zipper closure
- Elastic wrists
- Elastic ankles

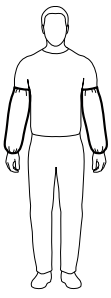
Sizes: S – 5X
Case Pack: 25

Coverall
C2428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

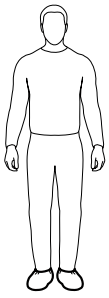
Apron
C2601
- Sewn ties

Sizes: 28"w x 36"l
Case Pack: 100



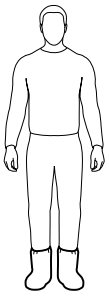
Sleeve
C2850
- Elastic ends

Sizes: 18" length
Case Pack: 100 pair



Shoe Cover
C2901
- Elastic ankles

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair



Boot Cover
C2903
- Elastic top
- 17" high

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair

All ZoneGard® garments are available in White or Navy. For Navy, add an "N" to the end of the style number.

SafeGard® SMS

Serged Seams

Dry Particulate

Get great protection and breathability with SafeGard® SMS!

SafeGard® SMS Protective Garments from Lakeland Industries, Inc. are well named. They keep employees safe from numerous dry particles and water-based liquids. SafeGard® garments can be used in work environments where hazardous or non-hazardous contaminants may be present. These garments feature 3 tough layers to keep contaminants out. The 2 outer layers are made of spunbonded filaments that stand up to tearing and abrasion. The inner layer is of melt-blown polypropylene microfibers that filter out potentially harmful particulates and liquids.

Breathability is the bonus; air and water vapor pass through for superior wearer comfort.

Coveralls feature a deluxe pattern with 2 sewn pockets and elastic in the back. Available in Sky Blue, too!

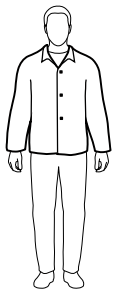
SafeGard® Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	1.5 oz/y^2
Grab Tensile MD	ASTM D5034	lbs.	25 lbs.
Grab Tensile XD	ASTM D5034	lbs.	20 lbs.
Trap Tear MD	ASTM D5733	lbs.	7.9 lbs.
Trap Tear XD	ASTM D5733	lbs.	6.7 lbs.

SafeGard® SMS Labcoats are perfect for the office or work environment!

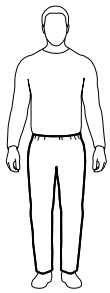
Labcoat
C8101
- Snap closure
- 2 pockets
- Long sleeve

Sizes: S – 5X
Case Pack: 30



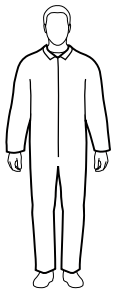
Shirt
C8201
- Snap closure
- Long sleeves

Sizes: S – 5X
Case Pack: 50



Pants
C8301
- Elastic waist

Sizes: S – 5X
Case Pack: 50



Coverall
C8412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall
C8414
- Zipper closure
- Attached hood
- Boots
- Elastic wrists

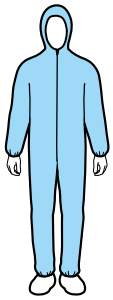
Sizes: S – 5X
Case Pack: 25

Coverall
C8417
- Zipper closure
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

Coverall
C8428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25



All SafeGard® SMS garments are available in white or Sky Blue. For Sky Blue, add a "B" at the end of the style number.

SafeGard® Economy SMS

Lighter in weight and more breathable. That's the benefit of SafeGard® Economy SMS

SafeGard® Economy SMS garments are an economical version of SafeGard® SMS and offer similar protection. SafeGard® Economy SMS garments can be used in work environments where hazardous or non-hazardous contaminants may be present. With a fabric weight of 45 grams, these garments are lighter and offer better breathability and increased comfort, meeting ANSI/ISEA 101-1996 sizing requirements. No pockets or elastic in back help to keep the cost low. Available in white or blue.

Economy SMS Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	1.5 oz/y^2
Grab Tensile MD	ASTM D5034	lbs.	25 lbs.
Grab Tensile XD	ASTM D5034	lbs.	20 lbs.
Trap Tear MD	ASTM D5733	lbs.	7.9 lbs.
Trap Tear XD	ASTM D5733	lbs.	6.7 lbs.

Coverall
E8412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall
E8414
- Zipper closure
- Attached hood
- Boots
- Elastic wrists

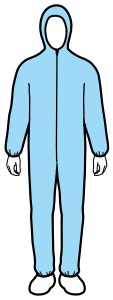
Sizes: S – 5X
Case Pack: 25

Coverall
E8417
- Zipper closure
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

Coverall
E8428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25



All Economy SMS garments are available in White or Blue. For Blue, add a "B" at the end of the style number.

Pyrolon® Plus 2

Serged Seams

Dry Particulate

Flame Resistant

Perfect for use over thermally protective and arc protective clothing!

From coveralls to lab coats to dosimeter stripped nuclear wear, disposable clothing of Pyrolon® Plus 2 come with all the essential features, distinct advantages and assurances of protection that only quality design and materials can deliver.

- Second generation Pyrolon® Plus 2 offers wet or dry strength superior to that provided by other traditional Flame Resistant disposables
- Meets the NFPA 2113 requirements for section 5.1.9.
- Pyrolon® Plus 2 is breathable, making this a cool and comfortable garment to wear.

Pyrolon® Plus 2 can be used in work environments where hazardous or non-hazardous contaminants may be present. Pyrolon® Plus 2 quality standards meet ANSI/ISEA 101.

Wear Pyrolon® Plus 2 over expensive thermally protective and arc protective clothing!

Labcoat
07101
- Snap closure
- 2 pockets
- Long sleeve

Sizes: S – 5X
Case Pack: 30

Labcoat
07140
- Snap closure
- No pockets
- Long sleeves.

Sizes: S – 5X
Case Pack: 30

Shirt
07201
- Snap closure
- Long sleeves

Sizes: S – 5X
Case Pack: 50

Pants
07301
- Elastic waist

Sizes: S – 5X
Case Pack: 50

Coverall
07412
- Zipper closure

Sizes: S – 5X
Case Pack: 25

Coverall
07414
- Zipper closure
- Attached hood
- Boots
- Elastic wrists

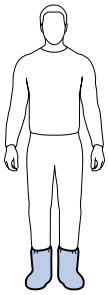
Sizes: S – 5X
Case Pack: 25

Coverall
07417
- Zipper closure
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

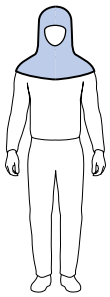
Coverall
07428
- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25



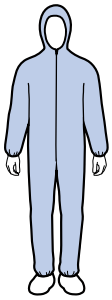
Blue Boot Cover
07903B
- Elastic top
- 17″ high

Sizes: S/M, L/XL, 2X
Case Pack: 200 pair



Blue Bell Shaped Hood
07903B
- Elastic face
- Covers shoulders
- One size

Case Pack: 200 pair



All Pyrolon® Plus 2 garments are available in White or Blue. For Blue, add a "B" at the end of the style number.

Do not use for fire protection. Avoid open flame or intense heat. Pyrolon® Plus 2 garments are not washable. Washing removes the special finishes, thereby removing the flame retardancy, water and oil repellent characteristics.

Pyrolon® Plus 2 Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y^2	2.4 oz/y^2
Grab Tensile MD	ASTM D5034	lbs.	31.0 lbs.
Grab Tensile XD	ASTM D5034	lbs.	20.0 lbs.
Trapezoidal Tear MD	ASTM D5733	lbs.	4.5 lbs.
Trapezoidal Tear CD	ASTM D5733	lbs.	5.6 lbs.
Air Permeability	ASTM D737	cfm	52 cfm
Char Length MD	ASTM D6413	inches	3.70 inches
Char Length XD	ASTM D6413	inches	3.70 inches
Ignition Point	–	degrees F	1000˚ F
Charge Decay	NFPA 99		Pass

Pyrolon® XT

Serged Seams | Dry Particulate | Flame Resistant

Pyrolon® XT coveralls are "Tough as Nails"!

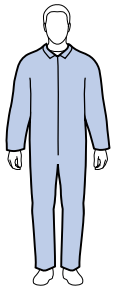
These flame resistant coveralls from Lakeland feature a set-in sleeve design meeting ANSI/ISEA 101-1996 so you can move easily and not worry about rip-outs. 70% stronger than Pyrolon® Plus 2, these garments are reinforced with a Cerex® Nylon scrim and a repellent finish. Our Pyrolon® XT wear is air permeable with very high MVTR's. They can be worn comfortably over Nomex® or Indura® FR garments to help keep grease and grime off the more expensive coveralls without compromising their properties. Pyrolon® XT is a cost effective garment for applications where FR clothing is required, such as on-site contractors or visitors. Pyrolon® XT can be used in work environments where hazardous or non-hazardous contaminants may be present.

Pyrolon® XT Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y2	2.9 oz/y2
Grab Tensile MD	ASTM D5034	lbs.	35.0 lbs.
Grab Tensile XD	ASTM D5034	lbs.	27.3 lbs.
Trapezoidal Tear MD	ASTM D5733	lbs.	9.6 lbs.
Trapezoidal Tear CD	ASTM D5733	lbs.	14.8 lbs.
Char Length MD	ASTM D6413	inches	4.0 inches
Char Length XD	ASTM D6413	inches	3.5 inches

Meets the NFPA 2113 requirements for section 5.1.9

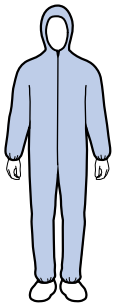
Do not use for fire protection. Avoid open flame or intense heat. Pyrolon® XT garments are not washable. Washing removes the special finishes, thereby removing the flame retardancy, water and oil repellent characteristics.



Coverall 27412

- Zipper closure

Sizes: S – 5X
Case Pack: 25

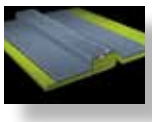


Coverall 27428

- Zipper closure
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5X
Case Pack: 25

Pyrolon® CRFR


Heat Sealed Seams


Liquid Splash/ Chemical Barrier


Flame Resistant

Disposable, Chemical Resistant, and Flame Resistant, all rolled into one garment

Pyrolon® CRFR protective wear...They're unique. They're disposable. They're chemical resistant. And they're flame resistant, meeting NFPA 2113 requirements. Imagine, all these qualities in one protective garment. Only from Lakeland.

Pyrolon® CRFR garments bar contaminating flammables like paint, oil and grease, hazardous liquids and contaminants, and dry particulates from penetrating to inner clothing.

Pyrolon® CRFR features:

- Light chemical splash protection
- Self extinguishing
- Won't melt or drip
- Meets the NFPA 2113 requirements for section 5.1.9.
- Designed to be worn over primary FR protective clothing, for environments where flash fire is a concern.

Coverall
51100
- Collar
- Storm flap over zipper
- Open wrists
- Open ankles
- Hemmed cuff

Sizes: S - 5XL
Case Pack: 6

Coverall
51110
- Collar
- Storm flap over zipper
- Elastic wrists
- Elastic ankles

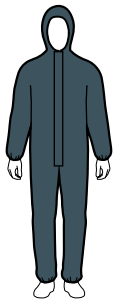
Sizes: S - 5XL
Case Pack: 6

Jacket
51250
- Collar
- Elastic wrists
- Double storm flap
- Hook and loop closure

Sizes: S - 5XL
Case Pack: 6

Pant
51300 Pant
- Elastic waist
- Elastic ankles.

Sizes: M-4X
Case Pack: 6

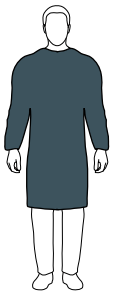


Coverall
51130
- Hood
- Storm flap over zipper
- Elastic face
- Elastic wrists and ankles

Sizes: S - 5XL
Case Pack: 6

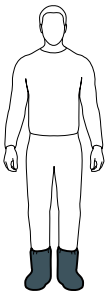
Coverall
51150
- Hood
- Storm flap over zipper
- Elastic face and wrists
- Attached boots

Sizes: S - 5XL
Case Pack: 6



Apron
51730
- Long sleeve
- Elastic wrists
- 32" length

Sizes: S-4X
Case Pack: 12



Boot Covers
51740
- Elastic top
- 17" high

Sizes: One size
Case Pack: 12 pair

Pyrolon® CRFR Physical Properties, 2.5 Mil

Physical Property	Test Method	Units	Test Results
Basis Weight		oz./sq. yd	4.92
Grab Tensile MD		lbs.	34
Grab Tensile XD		lbs.	27
Mullen Burst		lbs./sq.in.	35
Char Length MD		inches	4.7
Char Length XD		inches	4.5
Afterflame		seconds	<2
Thermal Protective Performance (TPP)		cal./cm2	6.8
Charge Decay	NFPA 99		Pass
Surface Resistance	EN1149-1:2006		Pass

Pyrolon® CRFR Penetration Data, 2.5 Mil, ASTM F903

Challenge Chemical	CAS Number	Physical State	Penetration Result
Acetone	67-64-1	Liquid	>60
Acetonitrile	75-05-8	Liquid	>60
Benzene	71-43-2	Liquid	>60
Carbon Disulfide	75-15-0	Liquid	>60
Diesel Fuel	N/A	Liquid	>60
Diethylamine	109-89-7	Liquid	>60
Crude Oil	N/A	Liquid	>60
Ethyl Acetate	141-78-6	Liquid	>60
n-Hexane	110-54-3	Liquid	>60
Hexamethylene Diisocyanate	822-06-0	Liquid	>60
Hydrochloric Acid	7647-01-0	Liquid	>60
Methanol	67-56-1	Liquid	>60
Methyl Ethyl Ketone (MEK)	78-93-3	Liquid	> 60
Methyl Isobutyl Ketone	108-10-1	Liquid	>60
Monochlorobenzene	108-90-7	Liquid	>60
n-Butyl Acetate	123-86-4	Liquid	>60
Orthodichlorobenzene, Grade F	95-50-1	Liquid	>60
Polychlorinated Biphenyl (PCB)	92-52-4	Liquid	> 60
Sodium Hydroxide, 50%	1310-73-2	Liquid	>60
Sulfuric Acid, 98%	7664-93-9	Liquid	45
Surrogate Gasoline (Toulene 50%) (Isooctane 50%)	108-88-3 540-84-1	Liquid	> 60
Tetrachloroethylene	127-18-4	Liquid	>60
Toluene	108-88-3	Liquid	>60
Trichlorobenzene Mixture	Mixture	Liquid	>60
Xylene	1330-20-7	Liquid	>60

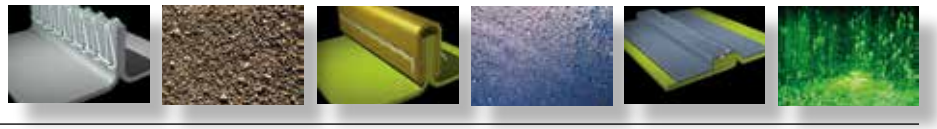
Note: Chemical Resistance Data is in accordance with ASTM F903 test method. Testing is performed on fabric samples only, not finished garments. Sources for all test data are independent laboratories. All tests were performed under laboratory conditions and not actual use conditions.

5 Reasons to Choose Pyrolon® CRFR Protective Wear

- Unique
- Chemical resistant
- Meets NFPA 2113 requirements for Section 5.1.9
- Disposable
- Flame resistant

All these qualities in one protective garment rolled into one. Only from Lakeland.

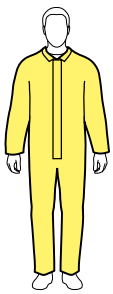
ChemMax® 1



Entry Level Chemical Protective Garment.

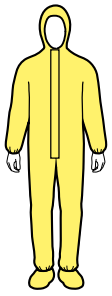
You've come to expect quality from Lakeland Industries. We've utilized our vast knowledge in the industry to develop a superior product in ChemMax® 1. Offering quality along with durability, this cost-effective entry level product will please distributors, safety engineers and plant purchasing managers. Whether you are in manufacturing, environmental clean up or chemical handling, you can trust the ChemMax® family of products to protect your workers from harm.

ChemMax® is constructed with a unique polyethylene barrier film and a continuous filament polypropylene nonwoven. ChemMax®1 garments bar many harmful contaminants from penetrating to inner clothing. Available with serged, bound and sealed seams for scalability, ChemMax® fits the Lakeland standard at a price you can afford.



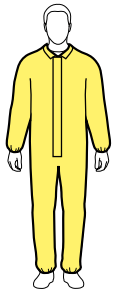
Coverall
C5412 Serged Seam
C55412 Bound Seam
- Zipper with storm flap

Sizes: S – 5XL
Case Pack: 25



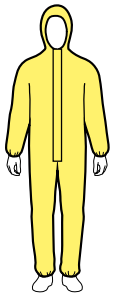
Coverall
C5414 Serged Seam
C55414 Bound Seam
- Zipper with storm flap
- Attached hood
- Attached boots
- Elastic wrists.

Sizes: S – 5XL
Case Pack: 25



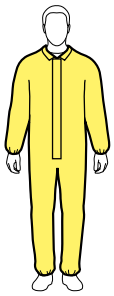
Coverall
C5417 Serged Seam
C55417 Bound Seam
- Zipper with storm flap
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 25



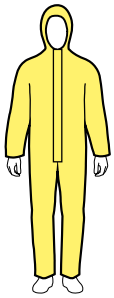
Coverall
C5428 Serged Seam
C55428 Bound Seam
- Zipper with storm flap
- Attached hood
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 25



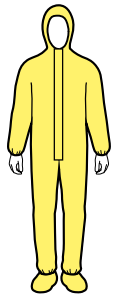
Coverall
C70110 Sealed Seam
- Collar
- Storm flap over zipper.
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6



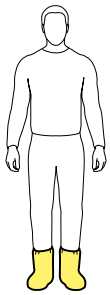
Coverall
C70130 Sealed Seam
- Zipper with storm flap
- Elastic face
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6



Coverall
C70150 Sealed Seam
- Zipper with storm flap
- Attached hood
- Elastic wrists
- Attached boots

Sizes: S – 5XL
Case Pack: 6



Boot Covers
C5903 Serged Seam
- Elastic top
- 17" high

Sizes: S/M, LG/XL, 2X
Case Pack: 200 pair

ChemMax® 1 Physical Properties

Property	Test Method	Units	ChemMax® 1
Basis Weight	ASTM D3776	oz/sy	2.29
Grab Tensile MD	ASTM D5034	pounds	35
Grab Tensile XD		pounds	27
Trapezoidal Tear MD	ASTM D5733	pounds	13.8
Trapezoidal Tear XD		pounds	14.2
Ball Burst	ASTM D751	pounds	25.5

Permeation Data for ASTM Recommended List of Chemicals for Evaluating Protective Clothing Materials (ASTM F1001)

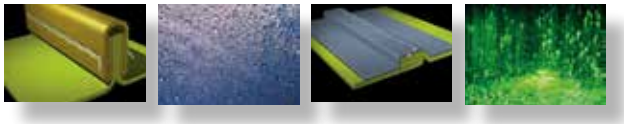
Challenge Chemical	CAS Number	Physical State	ChemMax® 1
Acetone	67-64-1	Liquid	imm.
Acetonitrile	75-05-8	Liquid	imm.
Ammonia Gas	7664-41-7	Gas	imm.
1,3-Butadiene Gas	106-99-0	Gas	imm.
Carbon Disulfide	75-15-0	Liquid	imm.
Chlorine Gas	7782-50-5	Gas	imm.
Dichloromethane	75-09-2	Liquid	imm.
Diethylamine	109-89-7	Liquid	imm.
Dimethyl Formamide	68-12-2	Gas	40 minutes
Ethyl Acetate	141-78-6	Liquid	imm.
Ethylene Oxide Gas	75-21-8	Gas	imm.
n-Hexane	110-54-3	Liquid	imm.
Hydrogen Chloride Gas	7647-01-0	Gas	imm.
Methanol	67-56-1	Liquid	imm.
Methyl Chloride Gas	74-87-3	Gas	imm.
Nitrobenzene	98-95-3	Liquid	45 minutes
Sodium Hydroxide, 50%	1310-73-2	Liquid	320 minutes
Sulfuric Acid, 96%	7664-93-9	Liquid	315 minutes
Tetrachloroethylene	127-18-4	Liquid	imm.
Tetrahydrofuran	109-99-9	Liquid	imm.
Toluene	108-88-3	Liquid	imm.

ND = None Detected
> = greater than
L = liquid
G = gas
Numbers reported are averages of samples tested by the ASTM F739 test method. Sample results do vary and therefore averages for these results are reported.

Warnings:
1. ChemMax® 1 is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of ChemMax® 1 should have slip resistant or anti-slip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.

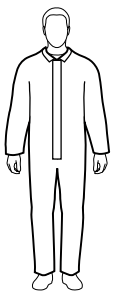
Note: *Chemical Resistance Data is in accordance with ASTM F-739 test method. Testing is performed on fabric samples only, not finished garments. Sources for all test data are independent laboratory conditions and not actual use conditions.*

ChemMax® 2



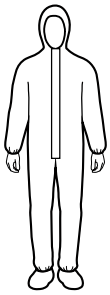
ChemMax® 2 offers quality, value, durability and the proven protection of Dow Saranex® 23P barrier film

ChemMax® 2 is the second level of barrier protection in the new ChemMax® line of products from Lakeland Industries. ChemMax® 2 is a superior and economical chemical protective suit developed using the knowledge and expertise that you have come to expect from Lakeland. The unparalleled strength and softness of ChemMax® 2 features Dow Saranex® 23P film on two layers of a unique bi-component spunbond nonwoven substrate and provides protection for chemical mixing and handling, environmental clean up, hazardous materials remediation and response, pharmaceutical manufacturing, spray painting and general industry. ChemMax® 2 is useful in protecting against hazardous chemicals and contaminants found in the work place.



Coverall
C44412 Bound Seam
- Zipper with storm flap

Sizes: S – 5XL
Case Pack: 12

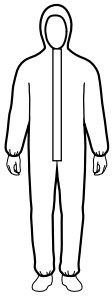


Coverall
C44414 Bound Seam
- Zipper with storm flap
- Attached hood
- Attached boots
- Elastic wrists

Sizes: S – 5XL
Case Pack: 12

Coverall
C44417 Bound Seam
- Zipper with storm flap
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 12



Coverall
C44428 Bound Seam
- Zipper with storm flap
- Attached hood
- Elastic wrists
- Elastic ankles

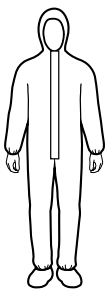
Sizes: S – 5XL
Case Pack: 12

Coverall
C72110 Sealed Seam
- Collar
- Storm flap over zipper.
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6

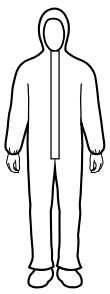
Coverall
C72130 Sealed Seam
- Zipper with storm flap
- Elastic face
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6



Coverall
C72150 Sealed Seam
- Zipper with storm flap
- Attached hood
- Elastic wrists
- Attached boots

Sizes: S – 5XL
Case Pack: 6



Coverall
C72165 Sealed Seam
- Respirator fit hood
- Storm flap over zipper
- Attached boots with boot flaps
- Velcro® closure over zipper

Sizes: S – 5XL
Case Pack: 6

ChemMax® 2 Physical Properties

Property	Test Method	Units	ChemMax® 2
Basis Weight	ASTM D3776	oz/sy	4.3
Grab Tensile MD	ASTM D5034	pounds	47
Grab Tensile XD		pounds	33.9
Trapezoidal Tear MD	ASTM D5733	pounds	29.95
Trapezoidal Tear XD		pounds	12.47
Ball Burst	ASTM D751	pounds	48
Surface Resistance	EN1149-1:2006	Pass/Fail	Pass

Permeation Data for ASTM Recommended List of Chemicals for Evaluating Protective Clothing Materials (ASTM F1001)

Challenge Chemical	CAS Number	Physical State	ChemMax® 2
Acetone	67-64-1	Liquid	9
Acetonitrile	75-05-8	Liquid	<15
Ammonia Gas	7664-41-7	Gas	15
1,3-Butadiene Gas	106-99-0	Gas	>480
Carbon Disulfide	75-15-0	Liquid	imm.
Chlorine Gas	7782-50-5	Gas	>480
Dichloromethane	75-09-2	Liquid	imm.
Diethylamine	109-89-7	Liquid	imm.
Dimethyl Formamide	68-12-2	Gas	18
Ethyl Acetate	141-78-6	Liquid	21
Ethylene Oxide Gas	75-21-8	Gas	24
n-Hexane	110-54-3	Liquid	21
Hydrogen Chloride Gas	7647-01-0	Gas	>410
Methanol	67-56-1	Liquid	>480
Methyl Chloride Gas	74-87-3	Gas	>480.
Nitrobenzene	98-95-3	Liquid	45
Sodium Hydroxide, 50%	1310-73-2	Liquid	>480
Sulfuric Acid, 98%	7664-93-9	Liquid	>480
Tetrachloroethylene	127-18-4	Liquid	imm.
Tetrahydrofuran	109-99-9	Liquid	imm.
Toluene	108-88-3	Liquid	imm.

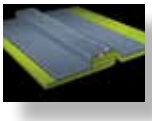
ND = None Detected
> = greater than
L = liquid
G = gas
Numbers reported are averages of samples tested by the ASTM F739 test method. Sample results do vary and therefore averages for these results are reported.

Warnings:
1. ChemMax® 2 is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of ChemMax® 2 should have slip resistant or anti-slip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.

Note: *Chemical Resistance Data is in accordance with ASTM F-739 test method. Testing is performed on fabric samples only, not finished garments. Sources for all test data are independent laboratory conditions and not actual use conditions.*

ChemMax® 3

Heat Sealed Seams



Liquid Splash/ Chemical Barrier

Advanced chemical protection for industrial, emergency responder and law enforcement.

ChemMax® 3 uses the latest technology to produce a superior product. Durable and lightweight, ChemMax® 3 provides a barrier against a broad spectrum of toxic industrial chemicals, dual-use chemicals, chemical warfare agents and other harmful contaminants.

The multi-layer film is applied to a heavy polypropylene nonwoven for increased strength and durability. The barrier film is significantly softer than other products on the market, resulting in a quiet, more comfortable garment.

Put your trust in a ChemMax® 3 garment and you will feel confident that you are doing your best to protect your team from the dangers lurking around them.

Coverall C3T110 Sealed Seam
- Collar
- Storm flap over zipper.
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6

Coverall C3T130 Sealed Seam
- Zipper with storm flap
- Elastic face
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6

Coverall C3T150 Sealed Seam
- Zipper with storm flap
- Attached hood
- Elastic wrists
- Attached boots

Sizes: S – 5XL
Case Pack: 6

Coverall C3T151
- Respirator-fit hood
- Storm flap over zipper
- Elastic face
- Elastic wrists
- Attached boots

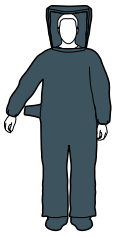
Sizes: S – 5XL
Case Pack: 6

Coverall C3T165
- Attached respirator-fit hood
- Double storm flap
- Hook and loop closure
- Elastic face and wrists
- Attached boots with boot flaps

Sizes: S – 5XL
Case Pack: 6

Coverall C3T166
- Respirator fit hood
- Double storm flap over zipper
- Elastic wrists and ankles
- Velcro® closure over zipper

Sizes: S – 5XL
Case Pack: 6



Encapsulated Suit C3T400
- Rear entry/Flat back
- 48" zipper/Storm flap
- 20 mil PVC face shield
- Elastic wrists
- 1 exhaust port/shroud
- Air tube inlet
- Attached sock boots with boot flap
- Suit is not gas/vapor tight

Sizes: S – 5XL
Case Pack: 1

Encapsulated Suit C3T450, Level B
- Rear entry
- Expanded back
- 48" zipper
- Double storm flap
- 20 mil PVC face shield
- Elastic wrists
- 2 exhaust ports/shroud
- Attached sock boots with boot flap
- Suit is not gas/vapor tight

Sizes: S – 5XL
Case Pack: 1

ChemMax® 3 Physical Properties

Property	Test Method	Units	ChemMax® 3
Basis Weight	ASTM D3776	oz/sy	4.5
Grab Tensile MD	ASTM D5034	pounds	58.7
Grab Tensile XD		pounds	42.2
Trapezoidal Tear MD	ASTM D5733	pounds	25.6
Trapezoidal Tear XD		pounds	19.8
Ball Burst	ASTM D751	pounds	54.5
Surface Resistance	EN1149-1:2006	Pass/Fail	Pass

Permeation Data for ASTM Recommended List of Chemicals for Evaluating Protective Clothing Materials (ASTM F1001)

Challenge Chemical	CAS Number	Physical State	ChemMax® 3
Acetone	67-64-1	Liquid	>480
Acetonitrile	75-05-8	Liquid	>480
Ammonia Gas	7664-41-7	Gas	>480
1,3-Butadiene Gas	106-99-0	Gas	>480
Carbon Disulfide	75-15-0	Liquid	178
Chlorine Gas	7782-50-5	Gas	>480
Dichloromethane	75-09-2	Liquid	>480
Diethylamine	109-89-7	Liquid	imm.
Dimethyl Formamide	68-12-2	Gas	>480
Ethyl Acetate	141-78-6	Liquid	>480
Ethylene Oxide Gas	75-21-8	Gas	>480
n-Hexane	110-54-3	Liquid	>480
Hydrogen Chloride Gas	7647-01-0	Gas	>480
Methanol	67-56-1	Liquid	>480
Methyl Chloride Gas	74-87-3	Gas	>480.
Nitrobenzene	98-95-3	Liquid	>480
Sodium Hydroxide, 50%	1310-73-2	Liquid	>480
Sulfuric Acid, 98%	7664-93-9	Liquid	>480
Tetrachloroethylene	127-18-4	Liquid	>480
Tetrahydrofuran	109-99-9	Liquid	320
Toluene	108-88-3	Liquid	>480

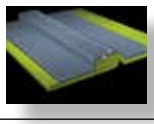
ND = None Detected
> = greater than
L = liquid
G = gas
Numbers reported are averages of samples tested by the ASTM F739 test method. Sample results do vary and therefore averages for these results are reported.

Warnings:
1. ChemMax® 3 is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of ChemMax® 3 should have slip resistant or anti-slip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.

Note: *Chemical Resistance Data is in accordance with ASTM F-739 test method. Testing is performed on fabric samples only, not finished garments. Sources for all test data are independent laboratory conditions and not actual use conditions.*

ChemMax® 4

Heat Sealed Seams



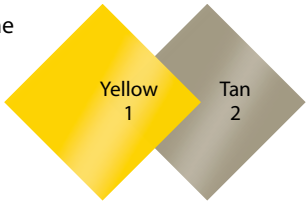
Liquid Splash/ Chemical Barrier

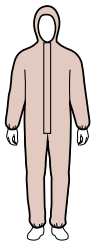
Heavy Duty Chemical Splash Protection that is high in performance and comfort!

This line of high performance chemical protection can be used in work environments where hazardous or non-hazardous contaminants may be present. ChemMax® 4 is at the top of the ChemMax line of clothing. ChemMax® 4 features a 6 layer protective barrier that will stand up to the toughest of hazardous chemical environments.

ChemMax® 4 Colors

ChemMax® 4 chemical clothing is available in 2 different colors; yellow and tan. The second number in the Lakeland style number designates the color.



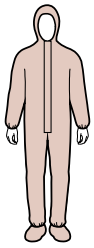


Coverall
42130 (Tan)
- Zipper with storm flap
- Elastic face
- Elastic wrists
- Elastic ankles

Sizes: S – 5XL
Case Pack: 6

Coverall
42150 (Tan)
- Zipper with storm flap
- Attached hood
- Elastic wrists
- Attached boots

Sizes: S – 5XL
Case Pack: 6

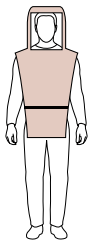


Coverall
41151 (Yellow)
42151 (Tan)
- Respirator-fit hood
- Storm flap over zipper
- Elastic face/wrists
- Attached boots

Sizes: S – 5X
Case Pack: 6

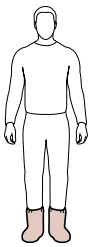
Coverall
41165 (Yellow)
42165 (Tan)
- Attached respirator-fit hood
- Double storm flap
- Hook and loop closure
- Elastic face and wrists
- Attached boots with boot flaps

Sizes: S – 5X
Case Pack: 6



Long Bib Style Hood
41716 (Yellow)
42716 (Tan)
- 20 mil PVC lens.

Sizes: One Size
Case Pack: 6



Boot Covers
41740 (Yellow)
42740 (Tan)
- Elastic top

Sizes: One Size
Case Pack: 12 pair

Encapsulated Suit
41450 (Yellow)
42450 (Tan)
- Rear entry
- Expanded back
- 48" zipper
- Double storm flap
- 20 mil PVC face shield
- Elastic wrists
- 2 exhaust ports with shroud
- Air tube inlet
- Attached sock boots with boot flap
- Suit is not gas/vapor tight

Sizes: M – 4XL
Case Pack: 3

ChemMax® 4 Physical Properties

Property	Test Method	Units	ChemMax® 4
Basis Weight	ASTM D3776	oz/sy	6.5
Grab Tensile MD	ASTM D5034	pounds	112
Grab Tensile XD		pounds	90
Trapezoidal Tear MD	ASTM D5733	pounds	51.2
Trapezoidal Tear XD		pounds	37.2
Ball Burst	ASTM D751	pounds	141

Permeation Data for ASTM Recommended List of Chemicals for Evaluating Protective Clothing Materials (ASTM F1001)

Challenge Chemical	CAS Number	Physical State	ChemMax® 4
Acetone	67-64-1	Liquid	>480
Acetonitrile	75-05-8	Liquid	>480
Ammonia Gas	7664-41-7	Gas	>480
1,3-Butadiene Gas	106-99-0	Gas	>480
Carbon Disulfide	75-15-0	Liquid	>480
Chlorine Gas	7782-50-5	Gas	>480
Dichloromethane	75-09-2	Liquid	>480
Diethylamine	109-89-7	Liquid	>480
Dimethyl Formamide	68-12-2	Gas	>480
Ethyl Acetate	141-78-6	Liquid	>480
Ethylene Oxide Gas	75-21-8	Gas	>480
n-Hexane	110-54-3	Liquid	>480
Hydrogen Chloride Gas	7647-01-0	Gas	>480
Methanol	67-56-1	Liquid	>480
Methyl Chloride Gas	74-87-3	Gas	>480.
Nitrobenzene	98-95-3	Liquid	>480
Sodium Hydroxide, 50%	1310-73-2	Liquid	>480
Sulfuric Acid, 98%	7664-93-9	Liquid	>480
Tetrachloroethylene	127-18-4	Liquid	>480
Tetrahydrofuran	109-99-9	Liquid	>480
Toluene	108-88-3	Liquid	>480

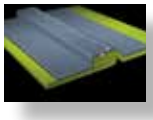
ND = None Detected
> = greater than
L = liquid
G = gas
Numbers reported are averages of samples tested by the ASTM F739 test method. Sample results do vary and therefore averages for these results are reported.

Warnings:
1. ChemMax® 4 is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of ChemMax® 4 should have slip resistant or anti-slip materials on the outer surface of boots, shoe covers or other garment surfaces in conditions where slipping could occur.

Note: *Chemical Resistance Data is in accordance with ASTM F-739 test method. Testing is performed on fabric samples only, not finished garments. Sources for all test data are independent laboratory conditions and not actual use conditions.*

Interceptor®

Heat Sealed Seams



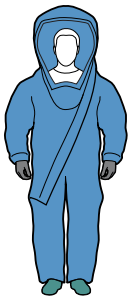
Liquid Splash/ Chemical Barrier

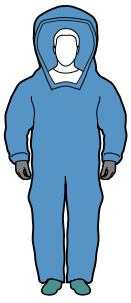
Interceptor® is your first line of defense against extreme chemical hazards.

Interceptor® is the apex of Lakeland Industries' chemical protective clothing line. Manufactured to meet CE type 1 requirements and available in encapsulated and non-encapsulated configurations, there is an Interceptor® suit for your needs be it gas, vapor, aerosol, liquids, harmful contaminants or particulate protection.

Interceptor Features

- PTFE visor process permanently seals the visor into the suit with no sewing involved so that liquids can't penetrate the visor edge
- Available in CE type 1 certified level A as well non-encapsulating configurations.
- PTFE outer layer on visor prevents impairment of vision due to chemical contact
- Attached gloves include non-reversing Silver Shield inner glove with Butyl outer glove
- Optional Neoprene outer glove available





80640/80640W - Wide-View Face Shield

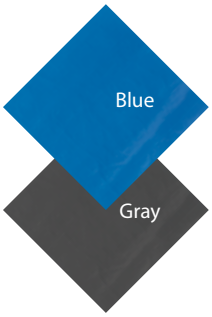
Blue CE Type 1:EN943:2005 Vapor tight (Level A) Deluxe Encapsulating Suit- Fully encapsulated, front-entry vapor-protective suit. Available in wide-view face shield configuration as 80640W. Storage bag included.
Sizes: S – 5X
Case Pack: 1

80650/80650W - Wide-View Face Shield

Blue CE Type 1:EN943:2005 Vapor tight (Level A) Deluxe Encapsulating Suit- Fully encapsulated, rear-entry vapor-protective suit. Available in wide-view face shield configuration as 80650W. Storage bag included.
Sizes: S – 5X
Case Pack: 1

Interceptor® Colors

Interceptor® chemical clothing is available in Blue and Gray.



Interceptor® Physical Properties

Physical Property	Test Method	Units	Test Results
Basis Weight	ASTM D3776	oz/y2	9
Grab Tensile MD	ASTM D5034	lbs.	216 lbs.
Grab Tensile XD	ASTM D5034	lbs.	165 lbs.
Trapezoidal Tear MD	ASTM D5733	lbs.	43.7 lbs.
Trapezoidal Tear CD	ASTM D5733	lbs.	57.9 lbs.
Ball Burst	ASTM D3787	lbs.	173 lbs.

Permeation Data for ASTM Recommended List of Chemicals for Evaluating Protective Clothing Materials (ASTM F1001)

Chemical Name	Physical Phase	Normalized Break-through Time (min.)	CAS No.
Acetone	L	>480	67-64-1
Acetonitrile	L	>480	75-05-8
Ammonia (gas)	G	>480	7664-41-7
1,3- Butadiene	G	>480	106-99-0
Carbon disulfide	L	>480	75-15-0
Chlorine gas	G	>480	7782-50-5
Dichloromethane	L	>480	75-09-2
Diethylamine	L	>480	109-89-7
N,N-Dimethylformamide	L	>480	68-12-2
Ethyl acetate	L	>480	141-78-6
Ethylene oxide	G	>480	75-21-8
n-Hexane	L	>480	110-54-3
Hydrogen chloride	G	>480	7647-01-0
Methanol	L	>480	67-56-1
Methyl chloride	G	>480	74-87-3
Nitrobenzene	L	>480	98-95-3
Sodium hydroxide, 50%	L	>480	1310-73-2
Sulfuric acid (conc.)	L	>480	7664-93-9
Tetrachloroethylene	L	>480	127-18-4
Tetrahydrofuran	L	>480	109-99-9
Toluene	L	>480	108-88-3

> = greater than, L = liquid, G = gas

Note: *Chemical Resistance Data is in accordance with ASTM F-739 test method. Testing is performed on fabric samples only, not finished garments. Sources for all test data are independent laboratory conditions and not actual use conditions.*

Permeation Data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Avg. Breakthrough Time
GA	Tabun	77-80-6	> 60 min.
GB	Sarin	107-44-8	> 60 min.
GD	Soman	99-64-0	> 60 min.
HD	Sulfur Mustard	505-60-2	> 60 min.
L	Lewisite	541-25-3	> 60 min.
VX	VX	50782-69-9	> 60 min.

Testing stopped at 60 minutes in accordance with NFPA 1991, 2005 requirements
> = greater than, < = less than, nt = not tested

For an instructional video on how to perform an encapsulated chemical suit pressure test, go to the Lakeland web site at www.lakeland.com

Chemical Options and Accessories

LEVEL A/NFPA Test Kit

Maintain your encapsulated suits with this easy to use test kit. Kit features an easy-to-read Magnehelic pressure gauge, digital timer, sturdy brass and steel fittings, hoses and connectors in a waterproof case. Complete instructions included.

Part No. 00010 – Level A Test Kit
Part No. 00011 – NFPA Test Kit
Part No. 00013 – Twist Lock valve fitting
Part No. 00015 – Adaptor for test kit to test DuPont Level A Suits
Part No. 00017 – Adapters for DuPont test kit to test Lakeland suits.
Part No. 00220 – International Universal test kit. Convertible to 220V and 110V.

Quick Disconnect Assembly for Gloves Option G7

Replacing the gloves on your encapsulated suit is a snap with this quick disconnect assembly. Twist off-twist on action makes for easy removal and installation. Outer replacement assemblies available.

ONEGlove® System, Option G3

The ONEGlove® system by Saint-Gobain consists of a Hazmat glove which has a Kevlar® outer glove, Nomex® inner glove, and a Fluoropolymer barrier film.

Hook and Loop Closure Boot Flap Option B1

Get your boots on and off easier with this hook and loop closure feature. After donning chemical boots, simply press the hook and loop closure together and you are ready to roll!

Options for Lakeland Interceptor® Level A and B Chemical Suits

Option	Description
A1	Add 1 side air tube
B1	Add hook and loop to boot flaps
F1	Add 10 mil Teflon® faceshield
F3	Add 20 mil PVC faceshield
F4	Add 40 mil PVC faceshield
G3	Add OneGlove® system to chemical suit
G5	Seal-tight glove system
G6	North Silvershield® gloves heat sealed to suit
G7	Quick disconnect assembly for gloves
G8	Replacement quick disconnect outer glove assembly, Butyl® (per pair)
G9	Replacement quick disconnect outer glove assembly, Viton® (per pair)
GA	Glove O-ring and clamp assembly
I1	Inspect, retest and recertify Level A suit*
I2	Install customer supplied pass-thru
N1	Add reflective numbers or letters to suit (4 max) each
P1	Scott® pass-thru with Hanson® fittings
P2	Scott ® pass-thru with Schrader fitting (NFPA approved on ensembles)
P3	Standard pass-thru (not NIOSH approved)
P4	Survivair® pass-thru with Hanson® fittings
P6	Draegar pass-thru with Hanson® fittings
P7	Draegar pass-thru with Foster® fittings
P14	North pass-thru with Hanson® fittings
R2	Reinforce crotch and elbows
R4	Reinforce elbows
R5	Reinforce knees
S1	Add sleeve guards
S2	Add double storm flap with hook and loop closure
S3	Add double storm flap with snaps
V1	Add 1 exhaust valve with cover
V2	Add 2 exhaust valves with covers
Z1	Invert zipper on Level A

Accessories for Interceptor® Level A and B chemical suits

Option	Description
Gloves	
00001	PVC glove ring
00020	25 mil Butyl gloves
00021	Viton® gloves
00024	17 mil Butyl glove
00025	North Silvershield® gloves
00027	Kevlar® knit gloves
Boot Covers and Boots	
00045	Onguard EZ Fit Hazmax® boots (NFPA Certified)
00046	Tingley® Hazmat Boots (NFPA Certified)
Cooling Vest	
00055	Phase Change® Vest, poly cotton outershell
00056	Phase Change® Vest, Banox® (FR Cotton) outershell
00057	Set of 4 Phase Change® inserts
00058	Phase Change® Vest, Nomex® outershell
Storage Bags	
00750	Level A storage bag
00760	Lakeland Utility Bag (Small)
00770	Lakeland Utility Bag (Large)
Valves	
00014	Exhaust Valve

WARNING! THESE SUITS ARE FOR TRAINING IN LEVEL A PROCEDURES ONLY! DO NOT USE IN ACTUAL HAZMAT ENVIRONMENTS!

ChemMax® 1 Encapsulated Training Suit C55450RE
ChemMax® 1 Encapsulated Training Suit, back entry, expanded back, Mylar® lens, bound seams. **Training Use Only!**
Case Pack: 6

Encapsulated Nylon Training Suit

95494 (Rear Entry)

95493 (Front Entry)
Encapsulated Nylon Training Suit, expanded back, sewn seams, 20 mil PVC faceshield, single storm flap, butyl gloves, 2 exhaust ports, attached sock boots.
Training Use Only! **Case Pack**: 1

Interceptor Training Suit
80491 (Rear Entry)
80497 (Front Entry)
Encapsulated front or rear entry with expanded back. Training suit with a 20 Mil PVC lens, 48" non separator cloth zipper that zips from bottom to top, zipper is reinforced at top and bottom with webbing on the outer side, double storm flap, exhaust port on back right side of hood, 1 exhaust port on left back side of body, sock boots, boot flaps sewn on, PVC gloves sewn on, Internal belt loops and assembled belt. No hem on splash guard or dump valve covers.
Training Use Only! **Case Pack**: 1

Phase Change Cool Vest

Wear a Cool Vest underneath a chemical protective suit and stay cool!

Adjustable straps make a comfortable fit!

Get Comfortable with a Phase Change Cool Vest® from Lakeland Industries

Working in HazMat/Protective suits can make anyone lose their cool. The Phase Change Cool Vests® worn under these suits give the user a greater degree of comfort. In fact, it creates a climate of 58° F. /14° C for up to three hours (depending on work environment).

How Do They Work?

These vests create a cooling energy from a unique Phase Change Material that is mechanically sealed in durable inserts. After freezing the inserts in ice water or a refrigerator for just 30 minutes, the vests deliver the constant cool temperature.

Unlike frozen water or gel products, our Phase Change Material maintains a consistent temperature of 58° F. /14° C during its transition from a solid to a liquid. This ensures that the wearer receives a constant cooling temperature throughout the entire two to three hour period.

Safe and Effective

At Lakeland Industries, we are very concerned about the materials we use in our products. Our Phase Change Material is made of a proprietary blend of alkanes with unique thermal properties. The inserts are non-toxic and non-flammable and can be used over and over again. To achieve continuous cooling, additional insert sets are available so the user can rotate each set.

Comfort is Key

Designed for comfort, these vests are washable and lightweight. The built-in side and shoulder adjustments provide a better fit. To suit a variety of users, the vests come in many styles, sizes and fabrics, including polycotton and Nomex®.

If you want a safe and effective way to keep your workers cool, get the Phase Change Cool Vest®, available at Lakeland.

Style 00055 – Polycotton Cool Vest® with Phase Change inserts. **Case Pack**: 1
Style 00058 – Nomex® Cool Vest® with Phase Change inserts. **Case Pack**: 1
Style 00056 – Banox (FR Cotton) with Phase Change inserts. **Case Pack**: 1
Style 00057 – Set of 4 Cool Vest replacement inserts. **Case Pack**: 1

Cut Resistant Gloves and Sleeves

SpiderGrip® Cut Resistant Work Gloves

Style 96-5205 Spider Grip High Performance Polyethylene (HPPE) polyurethane dipped glove, cut level 3, sizes S-XL

- Advanced protection of high performance fibers
- Seamless design
- Ergonomic fit
- Super cut and Puncture Protection
- Long wearing

ShurRite® Kevlar® Cut Resistant Gloves

Style 21-1634 7 gauge 100% Kevlar knit glove, black PVC dots, (2 sides), cut level 2, sizes S-XL.

- Excellent cut resistance
- Heat resistant
- Out last cotton, leather and coated gloves
- Excellent dexterity and flexibility
- Breathable for better comfort

Kevlar® Sleeves

Style 41822 100% Kevlar, 2 ply sleeve, 3" width, cut level 2, 18 in length.

Style 41822TH 100% Kevlar, 2 ply sleeve, 3 in width, thumb hole, cut level 2, 18 in length.

- Excellent cut resistance
- Heat resistant
- Convenient thumb hole design
- Available in 14" to 24 in length

Warranty and Warnings

Warranty Information
It is the responsibility of the user to select garments or products which are appropriate for each intended use and which meet all specified government and industry standards.

IMPROPER USE OF THESE PRODUCTS MAY RESULT IN PERSONAL INJURY OR DEATH. IMPROPER USE INCLUDES, BUT IS NOT LIMITED TO IMPROPER SELECTION, USE WITHOUT ADEQUATE TRAINING, DISREGARDING THESE WARNINGS AND INSTRUCTIONS SUPPLIED WITH THE PRODUCTS AND FAILURE TO INSPECT AND MAINTAIN THE PRODUCTS. THESE PRODUCTS ARE INTENDED TO BE USED ONLY IN CONJUNCTION WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) RULES AND REGULATIONS, (http://www.epa.gov/lawsregs/) AND THE REQUIREMENTS OF OSHA SAFETY AND HEALTH STANDARD 29 CFR 1910 AVAILABLE FROM THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, (http://www.osha.gov), AND OTHER PERTINENT NATIONALLY RECOGNIZED STANDARDS, SUCH AS THOSE PROMULGATED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) (www.nfpa.org), THE AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM) (www.astm.org), THE NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH) (www.cdc.gov/niosh/rpg), AND THE U.S.COAST GUARD OR DEPARTMENT OF DEFENSE. it is incumbent upon the wearer and legally required of an employer to read and understand these regulations.

THESE PRODUCTS ARE NOT FLAME RESISTANT AND SHOULD NOT BE USED AROUND HEAT, FLAME, SPARKS, OR IN POTENTIALLY FLAMMABLE OR EXPLOSIVE ENVIRONMENTS *EXCEPT* WHERE OUR GARMENTS ARE SPECIFICALLY ADVERTISED AS FIRE RESISTANT OR RETARDANT.

NO EXPRESSED OR IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR OF MERCHANTABILITY OR OTHERWISE IS MADE. Purchaser and all garment users shall promptly notify Lakeland Industries, Inc. of any claim, whether based on contract, negligence, strict liability or otherwise.

The sole and exclusive remedy of the purchaser and all end users and the limit of liability of Lakeland Industries, Inc. for any and all losses, injuries or damages shall be the refund of the purchase price or the replacement or repair of any product found to be defective within 90 days after the product is delivered. **IN NO EVENT SHALL LAKELAND INDUSTRIES, INC. BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT OR IN TORT, ARISING OUT OF ANY WARRANTIES, REPRESENTATIONS, INSTRUCTIONS, OR DEFECTS FROM ANY CAUSE IN CONNECTION WITH THE GARMENT, OR THE SALE THEREOF.**

Purchaser and all users are responsible for inspection and proper care of this product as described in any OF OUR care and use manuals and are responsible for all loss or damages from use or handling which results from conditions beyond the control of the manufacturer.

Product safety information is available upon

request. This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentations. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. It is the user's responsibility to determine the level of risk and the proper protective equipment needed for the user's particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, **LAKELAND INDUSTRIES, INC. MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.** Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

Warnings and Limitations

Lakeland's garments and products are not suitable for use in all situations and environments with all chemical and hazardous materials. All decisions regarding the choice and usage of chemical protective clothing must be done by trained and qualified safety professionals in accordance with all OSHA and EPA Rules and regulations. Failure to follow such regulations absolves Lakeland Industries, Inc. from all liability. It is the user's responsibility to determine the level of exposure and the proper personal protective equipment needed. It is the employer's LEGAL RESPONSIBILITY to provide PROPER protective clothing to employees, and provide adequate care, use and maintenance of these garments as only your employer knows the conditions under which the wearer works. Lakeland has no such knowledge, so ask your employer about what is required under the law and appropriate to your specific work application.

Lakeland chemical protective ensembles that are certified to NFPA 1991 require an over-cover. The protective over-cover provides additional protection against abrasion, cut, tear or puncture, and direct flame impingement. (All NFPA compliant Interceptor® ensembles utilize specific, multiple glove combinations and specific boots. All components of the specified ensemble must be worn to be compliant with the requirements of this standard.)

Lakeland protective garments will burn except where our garments are specifically advertised as fire resistant. These garments should not be worn around heat, open flames, sparks or any other possible ignition source nor in potentially explosive or flammable environments.

If the Lakeland protective garment or product is abraded, cut, torn, punctured or otherwise and in any way breached, do not use. The protective garment material has finite resistance to abrasion, cut, tear and puncture. It is the responsibility of the employer and the wearer to inspect Lakeland garments or products prior to use to insure the integrity of the products, garments and components.

If the Lakeland protective product or garment are damaged during use, retreat immediately to a safe environment, thoroughly decontaminate the garment, then dispose of it in a safe manner.

Limitations of Use

Lakeland protective garments are not intended for protection against radiological hazards.

If the danger of exposure to biological aerosols or chemical warfare chemicals exists, the use of a protective ensemble certified to the optional Chemical and Biological Terrorism requirements of NFPA 1991 (2005 Edition) or garments certified to Class 2 of NFPA 1994 should be considered. Each of these standards provides different levels of performance.

Chemical Permeation Data

Before using a protective ensemble, garments or products in a chemical situation, consult the chemical permeation data appropriate to the garment or product material. Note that seams, visors and closures will generally have lower or different permeation times than the garments' material. This information is to be used as a guide only. The permeation performance of any material depends on a number of factors including chemical concentration, temperature, time and amount of exposure. Due to the large number of variables, it is impossible for all ensemble materials to be tested against all elements, chemicals, all combinations or mixtures thereof, and all temperatures at which the element or chemical might be encountered.

Chemical permeation tests are performed under laboratory conditions -- not actual workplace conditions. They address chemical breakthrough characteristics and do not account for physical performance characteristics that affect a barrier such as abrasion, flex fatigue, puncture, tear, oxidative degradation, or degraded performance due to previous use contaminations.

No single protective material will protect against all chemicals for all situations. The best course of action is to test the primary protective garment materials against the specific chemical hazard, at the temperature and in the concentrations to be encountered. Lakeland Industries, Inc. will provide free swatches of primary garment materials for testing and can provide you with a list of testing facilities.

Never Use Pure Oxygen

The use of 100% oxygen with these garments presents serious fire safety and health hazards. Use only properly functioning breathing quality, compressed air, air line supplied breathing air, or a rebreather system. Note that some rebreather systems utilize small oxygen cylinders, but these do not create enriched oxygen atmosphere.

Wearing garments made of fire retardant cottons, aramids or modacrylics under or over Lakeland light non-woven, ChemMax® or Interceptor® garments will not reduce burn injury during a flash fire. Our products and garments will burn and possibly melt when exposed to flash fire; this is likely to increase burn injuries even when worn over flame resistant fabrics. This is also true of Lakeland MicroMax® NS, MicroMax® NS Cool Suit, MicroMax®, MicroMax® HBF, MicroMax® 3P, MicroMax® 3P Cool Suit, SafeGard®, SafeGard® Economy SMS, ZoneGard®, Rytex®, ChemMax® and Interceptor® line of products and other Lakeland light non-woven fabric lines. *However*, Pyrolon® fabrics and garments are intended to be worn over fire retardant cottons, aramids and modacrylics.

Therefore users of any of these flammable garments should not enter an environment in which the concentration of flammable gas (such as paint fumes, hydrocarbon fumes or pure oxygen) has reached a concentration which is within flammable, ignitable or explosive limits, causing a fire or flash fire.

Simply stated, if there is a flash fire, nothing will protect you from severe burns or death. Therefore, it is the user's responsibility to think before working in even a potential flammable gaseous atmosphere.

Lakeland's light non-woven fabrics, Chemax® and Interceptor® line, are not intended for fire fighting activities, nor for protection from hot liquids, steam, molten metals, welding, electrical arc or thermal radiation. **USE COMMON SENSE! DO NOT SMOKE, OR USE ELECTRICAL MACHINERY, AND INSURE USE OF PROPER BONDING AND GROUNDING** where flammable gas, liquids or solids exist. Anti-static treatments and coatings are not adequate for all environmental conditions. Static electricity in non-humid or winter environments can cause a deadly flash fire where flammables are present in the workplace. Lakeland's garments are intended to help reduce the potential for injury, but no protective apparel alone can eliminate all risk of injury. When dealing with fire, heat, or even the potential of same, look to Lakeland's **FIRE RESISTANT/RETARDANT APPAREL LINES**.

All of Your Safety Apparel Needs Under One Roof.

Disposable Clothing

Chemical Clothing

Reflective Clothing

Hand & Arm Protection

Woven Clothing

Lakeland Fire

All of your safety apparel needs under one roof.

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