

# Lakeland

PROTECTIVE  
CLOTHING  
FOR  
PEOPLE  
AT  
WORK



Limited Use Clothing



Chemical Protective Clothing



Hand and Arm Protection



Woven Clothing



Heat Protective Clothing

# Welcome!

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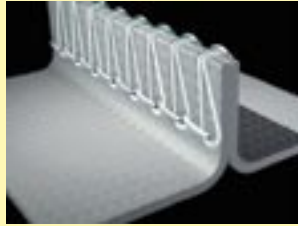
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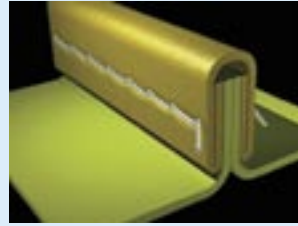
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Lakeland's Limited Use and Chemical Protective Apparel are available with these Seams:



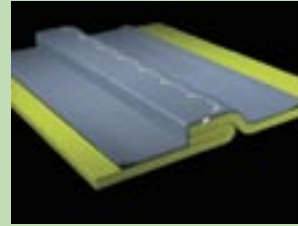
**Serged Seams**

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 limited use clothing where dry particles are of a concern.



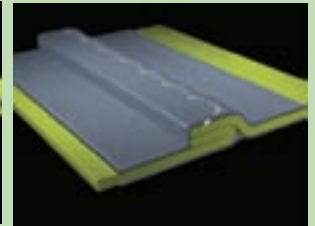
**Sewn and Bound Seams**

A sewn and 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.



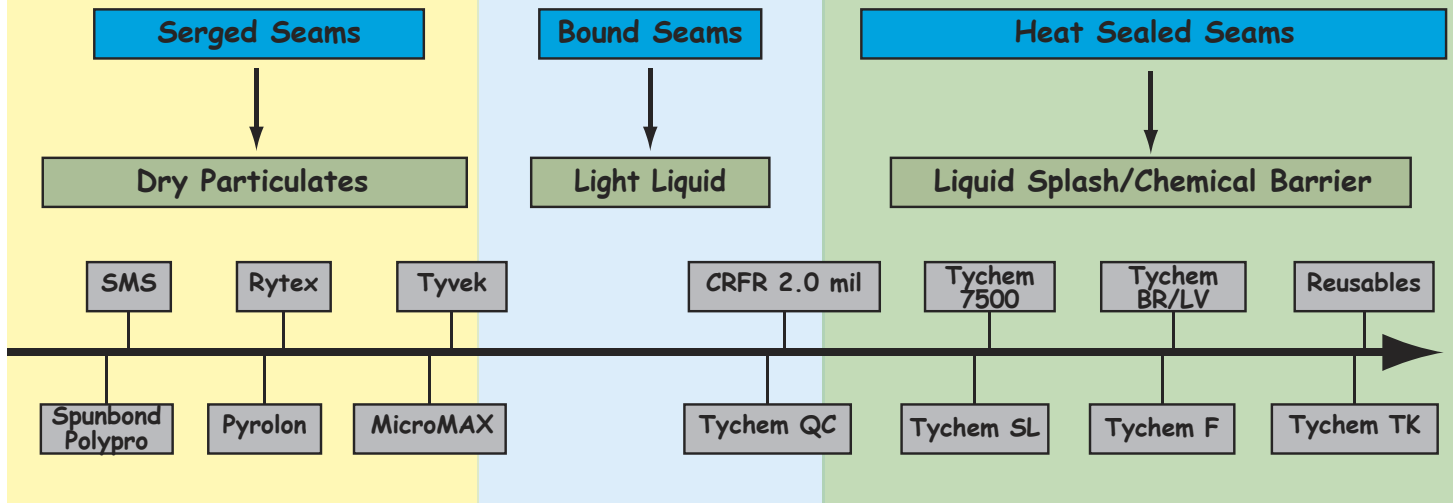
**Heat Sealed Seams**

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 Seams Plus**

This is the 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.



# Limited Use Clothing

**Tyvek®**

**Polypropylene®**

**Rytex®**

**MicroMax®**

**MicroMax® NS**

**SafeGard® 76 SMS**

**Pyrolon® Plus II**

**Pyrolon® XT**

**Pyrolon® CRFR**





# Tyvek®

Practically anywhere in industry, Tyvek® spunbonded olefin by DuPont has been hailed for years. It has served reliably as the unique material that imparts high strength, flexibility, durability, great barrier qualities and wearer comfort to protective clothing. Superior barrier, durability and breathability leave competitive materials far behind.

## Superior Barrier Performance

Competitive materials possess poor levels of barrier durability or excessive porosity, so they offer much lower barrier protection. Tyvek® delivers the best possible balance of performance you can get.

## Superior Durability

Tyvek® is built for the long run. Lakeland protective garments made with this enhanced material hang in with a durability superior to any other limited use material. Why? The tough barrier qualities of Tyvek® are found throughout the fabric.

## Tyvek® Physical Properties

Basis Weight (oz/yd <sup>2</sup> )	1.2 (ASTM D3776-85)
Thickness (mils)	5.5 (ASTM D1777-64)
Strip Tensile, lb/in (MD/CD)	7.8/8.9 (ASTM D1682)
Work to Break, in/lb (MD/CD)	2.5/3.5 (ASTM D1682)
Tongue Tear, lb (MD/CD)	2.3/2.3 (ASTM D2261)
Flammability	Class 1 (16 CFR 1610)



**Serged Seams**

## Tyvek® Quick Pic

- Industry leader for years
- Dry particulate protection
- High strength
- Great barrier qualities
- Excellent abrasion resistance



### Coverall, Style 01412

Tyvek® coverall with collar, zipper, set-in sleeve. Garment meets ANSI/ISEA 101-1996 specifications.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 7 lbs.



### Coverall, Style 01414

Tyvek® coverall, zipper, attached hood, attached non-skid boots, elastic wrists and ankles, set-in sleeve.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 9 lbs.



### Coverall, Style 01417

Tyvek® coverall with collar, zipper, elastic wrists and ankles, set-in sleeve.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 7 lbs.



### Coverall, Style 01427

Tyvek® coverall, zipper, attached hood, set-in sleeve.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 8 lbs.



### Coverall, Style 01428

Tyvek® coverall, zipper, attached hood, elastic wrists and ankles, set-in sleeve.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 8 lbs.



### Shirt, Style 01201

Tyvek® shirt, snap closure, long sleeve, roomy and comfortable.  
**Sizes:** S – 6X  
**Case Pack:** 50  
**Case Weight:** 7 lbs.



**Pants, Style 01301**

Tyvek® pants, elastic waist.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 7 lbs.



**Lab Coat, Style 01101**

Tyvek® lab coat, snap closure, 2 pockets, long sleeve.  
Sizes: S – 6X  
Case Pack: 30  
Case Weight: 6 lbs.  
Options:  
Style 01140 – no pockets on coat.  
Style 01104 – 2 pockets, elastic wrists.



**Frock, Style 01190**

Tyvek® frock, mandarin collar, 5 snaps, elastic wrists.  
Sizes: S – 6X  
Case Pack: 30  
Case Weight: 9 lbs.



**Smock, Style 01501**

Tyvek® smock, long sleeve, attached ties.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 10 lbs.



**Shoe cover, Style 901**

Tyvek® shoe cover  
Sizes: S/M, L/XL  
Case Pack: 200  
Case Weight: 6 lbs.



**Shoe cover, Style 901NS**

Tyvek®, non-skid shoe cover  
Sizes: S/M, L/XL  
Case Pack: 200  
Case Weight: 6 lbs.



**Shoe cover, Style 904**

Tyvek® shoe cover, vinyl sole.  
Sizes: S/M, L/XL  
Case Pack: 200  
Case Weight: 10 lbs.



**Hood, Style 701**

Tyvek® hood, drawstring closure.  
Sizes: One size  
Case Pack: 250  
Case Weight: 9 lbs.



**Hood, Style 713**

Tyvek® hood, elastic face, covers shoulders.  
Sizes: One size  
Case Pack: 250  
Case Weight: 8 lbs.



**Bouffant Hat Style 802-21**

Tyvek® bouffant hat.  
Sizes: 21" diameter  
Case Pack: 500  
Case Weight: 9 lbs.  
Note: Also available as Style 802-24, 24" diameter.



**Apron, Style 601**

Tyvek® apron, sewn ties.  
Size: 28" x 36"  
Case Pack: 100  
Case Weight: 6 lbs.



**Boot cover, Style 905**

Tyvek® boot cover, vinyl sole, elastic top.  
Sizes: S/M, L/XL  
Case Pack: 200  
Case Weight: 12 lbs.



**Boot cover, Style 903**

Tyvek® boot cover, 17" elastic top  
Sizes: S/M, L/XL  
Case Pack: 200  
Case Weight: 10 lbs.



**Boot cover, Style 903NS**

Tyvek®, non-skid boot cover, 17" elastic top  
Sizes: S/M, L/XL  
Case Pack: 200  
Case Weight: 10 lbs.



**Sleeves, Style 850-18**

Tyvek® sleeve, elastic at both ends.  
Size: 18"  
Case Pack: 100  
Case Weight: 4 lbs.

Tyvek is available in colors too! Call your Lakeland Customer Service Representative for more details.

1-800-645-9291

# Polypropylene®

## Polypropylene® Limited Use Garments: Cool clothing for Grimy Sites.

Lakeland's line of breathable polypropylene protective wear are appropriate for wear in the non-toxic workplace. 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.

### Polypropylene® Physical Properties

Basis Weight (oz/yd<sup>2</sup>)    1.25 (ASTM D3776-85)



#### Coverall, Style C2412

Polypro coverall with zipper.

Sizes: S - 6X

Case Pack: 25

Case Weight: 9 lbs.



#### Coverall, Style C2414

Polypro coverall, zipper, attached hood, attached boots, elastic wrists.

Sizes: S - 6X

Case Pack: 25

Case Weight: 11 lbs.



#### Coverall, Style C2417N

Polypro coverall with collar, zipper, elastic wrists and ankles.

Sizes: S - 6X

Case Pack: 25

Case Weight: 9 lbs.

*All Polypropylene® garments are available in white or navy.*



#### Coverall, Style C2427

Polypro coverall, zipper, attached hood.

Sizes: S - 6X

Case Pack: 25

Case Weight: 10 lbs.



#### Coverall, Style C2428N

Polypro coverall, zipper, attached hood, elastic wrists and ankles.

Sizes: S - 6X

Case Pack: 25

Case Weight: 11 lbs.



#### Lab Coat, Style 02101

Polypro lab coat, snaps, 2 pockets, long sleeves.

Sizes: S - 6X

Case Pack: 30

Case Weight: 7 lbs.



**Serged  
Seams**





**Lab Coat, Style 02140**

Polypro lab coat, snaps, no pockets.  
Sizes: S – 6X  
Case Pack: 30  
Case Weight: 7 lbs.



**Shirt, Style 02201**

Polypro shirt, snap closure, long sleeve.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 9 lbs.



**Pants, Style 02301**

Polypro pants, elastic waist.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 9 lbs.



**Smock, Style 02501**

Polypro smock, long sleeve, attached ties.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 10 lbs.



**Apron, Style 02601**

Polypro apron, sewn ties.  
Size: 28" x 36"  
Case Pack: 100  
Case Weight: 9 lbs.



**Sleeve, Style 02850**

Polypro sleeve, elastic ends.  
Sizes: 18" length  
Case Pack: 100 pr.  
Case Weight: 5 lbs.



**Bouffant Hat, Style 801**

Polypro bouffant hat.  
Sizes: 21"  
Case Pack: 500  
Case Weight: 7 lbs.



**Beard Cover, Style 877**

Polypro beard cover.  
Sizes: one size  
Case Pack: 500  
Case Weight: 7 lbs.



**Shoe Cover, Style 02901**

Polypro shoe cover.  
Size: S/M, L/XL  
Case Pack: 200 pr.  
Case Weight: 8 lbs.

*Also available in navy, Style 02901NS.*

**Polypropylene® Quick Pic**

- Economical
- Breathable; comfortable
- Perfect for non-hazardous, grimy work environments
- Dry dust and dirt protection

# Rytex®

Lakeland's line of polypropylene coated polypro garments offer excellent barrier for dry particulate and light liquid splash. Rytex material offers high strength, flexibility, and durability all at affordable prices. Economical and disposable, these Lakeland garments and accessories come in a wide range of styles and sizes.

## Rytex® Physical Properties

Basis Weight (oz/yd <sup>2</sup> )	1.60 oz/yd <sup>2</sup>
Thickness (mils)	9 mils (ASTM D1777-64)
Strip Tensile, lb/in (MD/CD)	MD 9.5 lbs CD 8.0 lbs (ASTM D5035)
Work to Break, in/lb (MD/CD)	MD 15.5 in CD 12.9 in-lbs (ASTM D5035)
Tongue Tear, lb (MD/CD)	MD 4.5 lbs CD 3.8 lbs (ASTM D2261)
Flammability	Pass



**Coverall, Style 09412**  
Coverall, zipper.  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 13 lbs.



**Coverall, Style 09414**  
Coverall, zipper, attached boots, elastic wrists.  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 15 lbs.



**Coverall, Style 09417**  
Coverall, zipper, elastic wrists and ankles.  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 13 lbs.



**Serged Seams**



**Coverall, Style 09428**  
Coverall, zipper, attached hood, elastic wrists and ankles.  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 14 lbs.



**Coverall, Style 9433**  
Coated Polypro front and sleeves, uncoated back, 2 pockets sewn on, elastic wrist, ankle and back.  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 10 lbs.



**Apron, Style 09601**  
Apron 28" x 36", sewn ties.  
Sizes: One size  
Case Pack: 100  
Case Weight: 11 lbs.



**Sleeve, Style 09850**  
Sleeve, elastic ends-18" length  
Sizes: One size  
Case Pack: 100 pr  
Case Weight: 4 lbs.

## Rytex® Quick Pic

- Economical
- Great Barrier
- High Strength
- Excellent abrasion resistance
- Liquid splash and dry particulate protection

# 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 any non-hazardous environment where dirt, grime, splashes and spills are present. The MicroMAX® fabric is comprised of a microporous film with a polyester 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. Call Lakeland Customer Service today for more information at 1-800-645-9291.

### MicroMAX® Physical Properties

Basis Weight	2.10 oz/yd <sup>2</sup>
Strip Tensile, lb/in (MD/XD)	12.4/10.0 (ASTM D5035)
Tensile-work to break, lb/in, (MD/XD)	17.0/20.3 (ASTM D5035)
Tensile Strength, lb/in (MD/XD)	32.4/32.6 (ASTM D5034)
Tongue Tear, lb (MD/XD)	5.1/6.2 (ASTM D2261)
Flammability	Pass (16CFR1610)



#### Coverall, Style TG414

Coverall, zipper closure, elastic wrists, attached hood and non-skid boot.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 10 lbs.



#### Coverall, Style TG417

Coverall, zipper closure, elastic wrists and ankles.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 8 lbs.



#### Coverall, Style TG428

Coverall, zipper closure, attached hood, elastic wrists and ankles.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 9 lbs.

### Serged Seams



#### Coverall, Style TG412

Coverall, zipper closure, deluxe pattern.  
**Sizes:** S – 6X  
**Case Pack:** 25  
**Case Weight:** 7 lbs.



#### Lab Coat, Style TG101

Lab coat, 3 snaps, 2 sewn-on pockets (1 hip, 1 breast).  
**Sizes:** S – 6X  
**Case Pack:** 30  
**Case Weight:** 7 lbs.



#### Smock, Style TG501

Smock, long sleeves, attached ties.  
**Sizes:** S – 6X  
**Case Pack:** 50  
**Case Weight:** 12 lbs.

### MicroMAX® Quick Pic

- Economical
- Great Barrier
- Excellent abrasion resistance
- Liquid splash and dry particulate protection
- Scrim reinforced for superior strength

# MicroMAX® NS

**Economical microporous protection from dirt, grease, grime and light chemical splash!**

MicroMAX® NS is the newest member of the protective clothing family from Lakeland Industries. This line of general purpose protective clothing can be used in any non-hazardous environment where dirt, grime, splashes and spills are present. Very economical and lightweight, MicroMAX® NS features high MVTR's and is breathable for worker comfort. MicroMAX® NS is strong, wet or dry. Call Lakeland Customer Service today for more information at 1-800-645-9291.

## MicroMAX® NS Physical Properties

Basis Weight	1.85 oz/yd2 (63 grams)
Strip Tensile (MD) (XD)	11.3 lbs. (ASTM D5035) 6 lbs. (ASTM D5035)
Tensile Strength (MD) (XD)	24.4 lbs. (ASTM D5034) 16.2 lbs. (ASTM D5034)
Trap/Tear (MD) (XD)	10.8 lbs. (ASTM D1117) 5.4 lbs. (ASTM D1117)
Ball Burst	25.1 lbs. (ASTM 3787)
Taber Abrasion	1062 cycles (ASTM 3884)
Mocon-Breathability	5031
Air Permeability	<0.562 cfm/ft <sup>2</sup> (ASTM D737)
Surface Resistivity	>10 <sup>10</sup> (ASTM D257)
Hydrostatic Resistance	127+ cfm (ASTM 4157)
Flammability	Pass (16CFR 1610 Cii)



**Serged Seams**

**New From Lakeland!**



**Coverall, Style CTL1412**

Coverall, zipper.  
Sizes: S - 6X  
Case Pack: 25  
Case Weight: 13 lbs.



**Coverall, Style CTL1414**

Coverall, zipper,  
attached boots, elastic  
wrists.  
Sizes: S - 6X  
Case Pack: 25  
Case Weight: 15 lbs.

## MicroMAX® NS Quick Pic

- Economical
- Great Barrier
- Excellent abrasion resistance
- Liquid splash and dry particulate protection
- Scrim reinforced for superior strength



**Coverall, Style CTL1428**

Coverall, zipper, attached hood, elastic wrists and ankles.  
Sizes: S – 6X  
Case Pack: 25



Case Weight: 13 lbs.  
**Apron, Style CTL601**

Apron, sewn ties, 28"x36"  
Sizes: One Size  
Case Pack: 100  
Case Weight: 10 lbs.



**Sleeve, Style CTL850**

Sleeve, elastic ends-18" length  
Sizes: One size  
Case Pack: 100 pr  
Case Weight: 4 lbs.



**Shoe Cover, Style CTL904**

Shoe cover, vinyl sole  
Sizes: One size  
Case Pack: 200 pr  
Case Weight: 11 lbs.



**Boot Cover, Style CTL905**

Boot cover, vinyl sole, elastic ankles  
Sizes: One size  
Case Pack: 200 pr  
Case Weight: 13 lbs.



**Lab Coat, Style CTL1140**

Lab Coat  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 10 lbs.

# SafeGard® 76 SMS

SafeGard® 76 SMS Protective Garments from Lakeland Industries, Inc. are well named. They keep employees safe from numerous dry particles and water-based liquids. SafeGard® 76 garments feature 3 tough layers to keep contaminants out.

The 2 outer layers are made with 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.**

SafeGard® 76 protective garments are available in 57g/in<sup>2</sup> weight with a melt-blown middle layer. These garments are rugged, stitched with serged seams to save on renting, laundering and replacing cloth garments. Coveralls feature a deluxe pattern with 2 sewn pockets and elastic in the back.

Available in Sky Blue, too!

## **Coverall, Style 8417**

Coverall, zipper closure, elastic back, elastic wrists and ankles, deluxe pattern, 2 sewn-on pockets (1 hip, 1 breast).

**Sizes:** S – 6X

**Case Pack:** 25

**Case Weight:** 9 lbs.



## **SafeGard® Physical Properties**

Basis Weight (oz/yd <sup>2</sup> )	1.65 oz/yd <sup>2</sup>
Thickness (mils)	12 mils
Strip Tensile, lb/in (MD/CD)	MD 10.1 lbs CD 8.9 lbs (ASTM D5035)
Work to Break, in/lb (MD/CD)	MD 12.1 in-lbs CD 11.5 in-lbs (ASTM D5035)
Tongue Tear, lb (MD/CD)	MD 3.2 lbs CD 4.0 lbs (ASTM D2264)
Flammability	Pass (16CFR1610)



**Coverall, Style 8412**

Coverall, zipper closure, elastic back, deluxe pattern, 2 sewn-on pockets (1 hip, 1 breast).  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 7 lbs.



**Coverall, Style 8427**

Coverall, zipper closure, elastic back, attached hood, deluxe pattern, 2 sewn-on pockets (1 hip, 1 breast).  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 9 lbs.



**Coverall, Style 8428**

Coverall, zipper closure, elastic back, attached hood, elastic wrists and ankles, deluxe pattern, 2 sewn-on pockets (1 hip, 1 breast).  
Sizes: S – 6X  
Case Pack: 25  
Case Weight: 9 lbs.



**Lab Coat, Style 8101**

Lab coat, 3 snaps, 2 sewn-on pockets (1 hip, 1 breast).  
Sizes: S – 6X  
Case Pack: 30  
Case Weight: 7 lbs.

**Serged Seams**



**Lab Coat, Style 8140**

Lab coat, 3 snaps.  
Sizes: S – 6X  
Case Pack: 30  
Case Weight: 6 lbs.



**Smock, Style 8501**

Smock, long sleeves, attached ties.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 10 lbs.



**Shirt, Style 8201**

Shirt, snaps, long sleeves.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 11 lbs.



**Pants, Style 8301**

Pants, elastic waist.  
Sizes: S – 6X  
Case Pack: 50  
Case Weight: 11 lbs.

**SafeGard®  
Quick Pic**

- Economical
- High breathability
- Deluxe pattern for superior support
- High strength
- Great dry particulate holdout

# Pyrolon® Plus 2

From coveralls to lab coats to dosimeter stripped nuclear wear, limited use garments of Pyrolon® Plus 2 come with all the essential features, distinct advantages and assurances of protection that only quality design and materials can deliver. Pyrolon® Plus 2 meets the stringent requirements of NFPA 701. It offers strength, wet or dry, over other traditional FR disposable garments. Pyrolon® Plus 2 is breathable, making this a cool and comfortable garment to wear. When worker efficiency and comfort are important, Pyrolon® Plus 2 garments are the critical choice.

## Pyrolon® Plus 2 makes our FR garments stronger!

Lakeland's popular lines of limited use protective wear made with second generation Pyrolon® Plus 2 offer wet or dry strength superior to that provided by other traditional Flame Resistant disposables. These rugged coveralls, shirts, pants, lab coats and dosimeter stripped nuclear wear feature sewn seams and, of course, Lakeland quality standards that meet ANSI/ISEA 101-1996. Their protection levels meet or exceed NFPA 701.

**Another "plus" in the Pyrolon® Plus 2 equation is the fabric cooling breathability, which permits worker comfort and enhances efficiency.**

### Pyrolon® Plus 2 Physical Properties

Basis Weight	2.4 (oz/yd <sup>2</sup> )
Grab Tensile	MD 31/11 (lbs/kg) XD 20/9.0 (lbs/kg) ASTM D1117/D1682
Trap Tear	MD 4.5/2.0 (lbs/kg) XD 5.6/2.5 (lbs/kg) ASTM D1117/D1682
Vertical Flammability	Pass (NFPA-701) Pass (CAN/CGSB 4.2)
Afterflame	<2 sec. (FTMS 191A)
Char Length	
MD (in)	3.70 (FTMS 191A)
XD (in)	3.70 (Method 5903)
Ignition Point	
Modified Muffle Furnace	1,000°F
Charge Decay	Pass (NFPA 99)
Resistivity (ohms/square)	2 X 10 <sup>7</sup> (ASTM-D-257)
Air Permeability, (cfm)	52 (IST 70.1)

*All Pyrolon® Plus 2 garments are available in white or navy.*



#### Coverall, Style 07412

Pyrolon® Plus 2 coverall with collar and zipper.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 14 lbs.



#### Coverall, Style 07414

Pyrolon® Plus 2 coverall, zipper, attached hood, elastic wrists, attached boots.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 17 lbs.



#### Coverall, Style 07427

Pyrolon® Plus 2 coverall, zipper, attached boot.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 16 lbs.



#### Coverall, Style 07428

Pyrolon® Plus 2 coverall, zipper, attached hood, elastic wrists and ankles.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 15 lbs.





**Coverall, Style 07417**

Pyrolon® Plus 2 coverall with collar, zipper, elastic wrist and ankle.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 16 lbs.



**Pants, Style 07301**

Pyrolon® Plus 2 pants - elastic waist  
**Sizes:** S-6X  
**Case Pack:** 50  
**Case Weight:** 10 lbs.

Pyrolon® Plus 2 garments meet NFPA 701 specifications. 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 retardency, water and oil repellency characteristics.



**Lab Coat, Style 07140**

Pyrolon® Plus 2 lab coat, snap closure, long sleeve, no pockets.  
**Sizes:** S-6X  
**Case Pack:** 30  
**Case Weight:** 9 lbs.



**Shirt, Style 07201**

Pyrolon® Plus 2 shirt - snap closure, long sleeve  
**Sizes:** S-6X  
**Case Pack:** 50  
**Case Weight:** 10 lbs.

*All Pyrolon® Plus 2 garments are available in white or navy.*

**Pyrolon® Plus 2 Quick Pic**

- Great Barrier
- High Strength
- Excellent abrasion resistance
- Light liquid splash and dry particulate protection
- Exceeds NFPA 701 for flame resistance

# Pyrolon® XT

These durable coveralls feature a set-in sleeve design that makes movement effortless, and makes rip-outs a thing of the past. Pyrolon® XT is a cost effective garment for applications where FR clothing is required, such as on-site contractors or visitors. Employee comfort is assured, as Pyrolon® XT has very high MVTR's.

## Pyrolon® XT coveralls are "Tough as Nails"!

These flame retardant 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, exceeding NFPA 701. 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.

### Pyrolon® XT Physical Properties

Basis Weight	2.9 (oz/yd <sup>2</sup> )
Breaking Strength - Grab (MD/XD)	35.0/27.3 lbs (ASTM D1682-64, Sect 5.3)
Tearing Strength - Trapezoid (MD/XD)	9.6/14.8 lbs (ASTM D1117-80)
NFPA 701 char. in (MD/XD)	4.0/3.5
NFPA 701 weight loss% (MD/XD)	3.0/3.5



**Serged Seams**

### Pyrolon® XT Quick Pic

- High strength, nylon scrim reinforced
- Excellent abrasion resistance
- Light liquid splash and dry particulate protection
- Exceeds NFPA 701 for flame resistance



#### Coverall, Style 27417

Pyrolon® XT coverall with collar, zipper, elastic wrist and ankle.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 16 lbs.



#### Coverall, Style 27427

Pyrolon® XT coverall with zipper, attached hood, elastic wrist and ankle.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 16 lbs.



#### Coverall, Style 27428

Pyrolon® XT coverall, zipper, attached hood, elastic wrist and ankles.  
**Sizes:** S-6X  
**Case Pack:** 25  
**Case Weight:** 17 lbs.



#### Coverall, Style 27412

Pyrolon® XT coverall with collar, zipper  
**Sizes:** S - 6X  
**Case Pack:** 25  
**Case Weight:** 15 lbs.

# Pyrolon® CRFR

Pyrolon® CRFR is unique. They're disposable. They're chemical resistant. And they're flame retardant, meeting NFPA 701 specifications. 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 dry particulates from penetrating to inner clothing.

## Pyrolon® CRFR Features:

- 2.0 mil. sealed seams
- Light chemical splash
- Flash fire protection
- Meets or exceeds NFPA 701, 1989 and 1996
- Self extinguishing
- Won't melt or drip
- Wear them as primary protection, or
- Can be worn over thermal protective coveralls such as Nomex® to keep them clean and provide extended life to the more expensive coveralls.

## Pyrolon® CRFR Physical Properties

Basis Weight (oz/yd <sup>2</sup> & gsm)	2.92/99
Grab Tensile, (lbs/kg)	MD 34.2/15.5 XD 24.2/10.9 (ASTM D117-D1682)
Trap Tear, (lbs/kg)	MD 7.2/3.2 XD 7.9/3.5 (ASTM D117-D1682)
Mullen Burst, (lbs/sq.in.)	27.2
Ball Burst, (lbs/sq.in.)	37.4
Drum Abrasions, (cycles)	900
Vertical Flammability	Pass (NFPA 701, 1989) Pass (NFPA 701, 1996)
Char Length, (inches/cm)	MD 4.1/10.4 XD 4.0/10.1
Afterflame, (seconds)	<2.0 (FTMS 191A)
Thermal Protective Performance, (cal/cm <sup>2</sup> )	5.1
Charge Decay	Pass (NFPA 99)
Resistivity, (ohms/cm)	3.55 x 10 <sup>14</sup>

### Coverall, Style 50100

Coverall, collar, open wrists and ankles.  
**Sizes:** S – 6X  
**Case Pack:** 6  
**Case Weight:** 6 lbs.



### Coverall, Style 50110

Coverall, collar, elastic wrists and ankles.  
**Sizes:** S-6X  
**Case Pack:** 6  
**Case Weight:** 6 lbs.



### Coverall, Style 50120

Coverall, collar, hood, elastic face, open wrists and ankles.  
**Sizes:** S-6X  
**Case Pack:** 6  
**Case Weight:** 6 lbs.

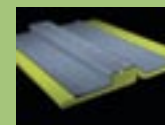


### Coverall, Style 50150

Coverall, attached hood, elastic face, wrists and attached boots.  
**Sizes:** S-6X  
**Case Pack:** 6  
**Case Weight:** 8 lbs.



**Sealed Seams**



## Pyrolon® CRFR Quick Pic

- Great barrier, chemical resistant
- High strength, nylon scrim reinforced
- Excellent abrasion resistance
- Liquid splash and dry particulate protection
- Exceeds NFPA 701 for flame resistance

# Chemical Protective Clothing

**Tychem<sup>®</sup> QC**

**Tychem<sup>®</sup> SL**

**Tychem<sup>®</sup> F**

**Tychem<sup>®</sup> 7500**

**Tychem<sup>®</sup> BR**

**Tychem<sup>®</sup> LV**

**Tychem<sup>®</sup> TK**

**NFPA Certified Garments**

**Cool Vest<sup>®</sup>**

**Permeation Data**





# Tychem® QC

## **Tychem® QC Polycoated Garments for Lightweight Splash Protection.**

Tychem® QC polyethylene-coated garments from Lakeland provide excellent lightweight splash protection from many inorganic acids and other liquid chemicals. Tychem® QC is a combination of Tyvek® fabric and a 1.25 mils coating of polyethylene. It is a good economical choice for use in many industrial plants and chemical cleanup operations. Seams are available in either serged, bound or heat sealed styles for increased holdout of liquids and dry particulates. Tychem® QC garments are available in high visibility yellow or gray.



# P E R M E A T I O N   D A T A

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	immediate	10
Acetonitrile	L	immediate	16
Ammonia (gas)	G	immediate	3.1
1,3- Butadiene	G	immediate	12
Carbon disulfide	L	immediate	high
Chlorine gas	G	immediate	>50
Dichloromethane	L	immediate	high
Diethylamine	L	immediate	64
N,N-Dimethylformamide	L	immediate	0.72
Ethyl acetate	L	immediate	12.7
Ethylene oxide	G	immediate	168
n-Hexane	L	immediate	high
Hydrogen chloride	G	immediate	9.3
Methanol	L	immediate	2.2
Methyl chloride	G	immediate	0.27
Nitrobenzene	L	immediate	18
Sodium hydroxide, 50%	L	>480	ND
Sulfuric acid (conc.)	L	>480	ND
Tetrachloroethylene	L	immediate	410
Tetrahydrofuran	L	immediate	183
Toluene	L	immediate	high

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

### Warnings:

1. Tychem® QC is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of Tychem® QC 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.

### Tychem® QC Physical Properties

Basis Weight (oz/yd <sup>2</sup> )	2.1 (ASTM D3776-85)
Thickness (mils)	26 (ASTM D1777-64)
Mullen Burst (psi)	66 (ASTM D3786-87)
Grab (md/xd) (ASTM D53034-90)	25/35 lbs
Trapezoid (md/xd) (ASTM D1117-80)	7/5 lbs

**Tychem® QC  
Quick Pic**

- Economical
- Light Chemical  
Splash Protection

# Serged or Sewn and Bound Seams

## Coverall, Style 05412

Tychem® QC coverall with collar and zipper. Serged seams.

**Sizes:** S – 5XL

**Case Pack:** 25

**Case Weight:** 9 lbs.

*\*Sewn and Bound seams available as Style No. 55412.*



Style 05412



Style 05414

## Coverall, Style 05414

Tychem® QC coverall, zipper, attached hood, boots, elastic wrists. Serged seams.

**Sizes:** S – 5XL

**Case Pack:** 25

**Case Weight:** 13 lbs.

*\*Sewn and Bound seams available as Style No. 55414.*

## Coverall, Style 05417

Tychem® QC coverall with collar and zipper, elastic wrist and ankles. Serged seams.

**Sizes:** S – 5XL

**Case Pack:** 25

**Case Weight:** 11 lbs.

*\*Sewn and Bound seams available as Style No. 55417.*



Style 05417



Style 05428

## Coverall, Style 05428

Tychem® QC coverall, zipper, attached hood, elastic wrists and ankles. Serged seams.

**Sizes:** S – 5XL

**Case Pack:** 25

**Case Weight:** 11 lbs.

*\*Sewn and Bound seams available as Style No. 55428.*





**Shirt, Style 05201**

Tychem® QC shirt - snap closure, long sleeve.  
Sizes: S – 5XL  
Case Pack: 50  
Case Weight: 10 lbs.



**Pants, Style 05301**

Tychem® QC pants - elastic waist  
Sizes: S – 5XL  
Case Pack: 50  
Case Weight: 10 lbs.



**Sleeves**

**Style No. 860**

Tychem® QC sleeve, elastic ends. Available in yellow only.  
Sizes: 18"  
Case Pack: 100  
Case Weight: 7 lbs.

**Apron**

**Style No. 650**

Tychem® QC apron, sewn ties. Available in yellow only.  
Sizes: 28" x 36"  
Case Pack: 100  
Case Weight: 9 lbs.



**Encapsulated Suit, Style 55455**

Tychem® QC encapsulated suit, front entry, zipper, hood with Mylar® face shield, boots, elastic wrist, air line hook up. Available in Sewn and Bound seam only; yellow only. Rear entry available as Style 55453.  
Sizes: S – 5XL  
Case Pack: 25  
Case Weight: 15 lbs.



**Apron, Style No. 527**

Tychem® QC open back apron, long sleeves, elastic wrist, sewn ties. Available in yellow only.  
Sizes: 28" x 36"  
Case Pack: 50  
Case Weight: 10 lbs.

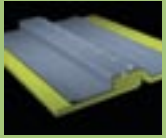
**Serged Seams**



**Sewn & Bound Seams**



Heat  
Sealed  
Seams



Sealed  
Seams

heat sealed



**Coverall, Style 70100**

Tychem® QC coverall, collar, open wrists and ankles.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 6 lbs.



**Coverall, Style 70110**

Tychem® QC coverall, collar, elastic wrists and ankles.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 6 lbs.



**Coverall, Style 70150**

Tychem® QC coverall, hood, elastic face, elastic wrists, attached sock boots.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 8 lbs.



**Jacket, Style 70250**

Tychem® QC jacket with collar, double storm flap with hook and loop closure, zipper, elastic wrists.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 6 lbs.



**Coverall, Style 70120**

Tychem® QC coverall, hood, elastic face, open wrists and ankles.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 7 lbs.



**Coverall, Style 70140**

Tychem® QC coverall, hood, elastic face, open wrists, attached sock boots.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 8 lbs.



**Sleeves, Style 70765**

Tychem® QC sleeves, elastic ends.

**Sizes:** 18" length

**Case Pack:** 12 pair

**Case Weight:** 6 lbs.



**Pants, Style 70300**

Tychem® QC pants, elastic waist, hemmed cuffs.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 6 lbs.



Tychem® QC sealed seam products are available in either yellow or grey material... first two digits of the style number designate color; "70\_ \_ \_" is yellow, "71\_ \_ \_" is grey.

**Hood, Style 70710**

Tychem® QC hood (pull-over), bell shape, elastic face.

**Sizes:** One size

**Case Pack:** 12

**Case Weight:** 6 lbs.



# Tychem® SL

## **Tychem® SL Garments – Protection Against A Broad Range of Chemicals.**

Tychem® SL is a laminated fabric incorporating DuPont's Tyvek® spunbonded olefin and Dow Chemical's Saranex® 23-P film. Tychem® SL protective clothing is available with a choice of two seam configurations: Sewn and Bound or Heat Sealed. Tychem® SL provides reliable and economical protection against a broad spectrum of chemicals. This apparel is a top choice among workers who are mixing, loading or applying agricultural chemicals, engaged in clean up operations, and general industrial environments.



# PERMEATION DATA

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	24	1.6
Acetonitrile	L	12	2.8
Ammonia (gas)	G	32	0.15
1,3- Butadiene	G	>480	<0.02
Carbon disulfide	L	immediate	>50
Chlorine gas	G	>480	<0.01
Dichloromethane	L	immediate	>50
Diethylamine	L	12	>50
N,N-Dimethylformamide	L	112	0.85
Ethyl acetate	L	14	0.54
Ethylene oxide	G	immediate	8.4
n-Hexane	L	146	0.48
Hydrogen chloride	G	>480	<0.01
Methanol	L	>480	<0.001
Methyl chloride	G	>480	<0.006
Nitrobenzene	L	102	2.3
Sodium hydroxide, 50%	L	>480	<0.1
Sulfuric acid (conc.)	L	>480	<0.1
Tetrachloroethylene	L	immediate	5.7
Tetrahydrofuran	L	immediate	>50
Toluene	L	immediate	25

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.

## Permeation Data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Avg. Break-through Time	Minimum Detectable Permeation
GA	Tabun	77-81-6	DN5	nt	nt
GB	Sarin	107-44-8	DN5 DN6	>6hrs. nt	<0.00012 nt
GD	Soman	99-64-0	DN5 DN6	nt nt	nt nt
HD	Sulfur Mustard	505-60-2	DN3 DN4	>3hrs. nt	<0.10000 nt
L	Lewisite	541-25-3	DN3 DN4	>6hrs. nt	<0.10000 nt
VX	VX	50782-69-9	DN5 DN6	>12hrs. nt	<0.00012 nt

> = greater than, < = less than, nt = not tested

**Fabric Test Protocols.** All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22°C, 50% R.H.

Protocol DN3 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN4 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

Protocol DN5 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN6 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

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## Tychem® SL Physical Properties

Basis Weight (oz/yd <sup>2</sup> ) ....	3.1 (ASTM D3776-85)
Thickness (mils) .....	10.3 (ASTM D1777-64)
Mullen Burst (psi) .....	78 (ASTM D3786-87)
Breaking Strength	
Grab (md/xd).....	42/45 lbs (ASTM D53034-90)
Tearing Strength	
Trapezoid (md/xd).....	11/9 lbs (ASTM D1117-80)

### Warnings:

1. Tychem® SL is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of Tychem® SL 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.

## Tychem® SL Quick Pic

- Light chemical splash protection
- Available in gray
- Tested against some chemical warfare agents

# Sewn and Bound Seams



### Coverall, Style 44414

Tychem® SL coverall, zipper with storm flap, attached hood, boots, elastic wrists. Bound seam construction.  
**Sizes:** S – 5XL  
**Case Pack:** 12  
**Case Weight:** 10 lbs.



### Coverall, Style 44412

Tychem® SL coverall with collar, zipper with storm flap. Bound seam construction.  
**Sizes:** S – 5XL  
**Case Pack:** 12  
**Case Weight:** 10 lbs.



### Coverall, Style 44417

Tychem® SL coverall with collar, zipper with storm flap, elastic wrist and ankles. Bound seam construction.  
**Sizes:** S – 5XL  
**Case Pack:** 12  
**Case Weight:** 10 lbs.



Sewn & bound Seams

sewn and bound



### Coverall, Style 44427

Tychem® SL coverall, zipper with storm flap, attached hood. Bound seam construction.  
**Sizes:** S – 5XL  
**Case Pack:** 12  
**Case Weight:** 12 lbs



### Coverall, Style 44428

Tychem® SL coverall, zipper with storm flap, attached hood, elastic wrist and ankles. Bound seam construction.  
**Sizes:** S – 5XL  
**Case Pack:** 12  
**Case Weight:** 12 lbs.



**Shirt, Style 44201**

Tychem® SL shirt - snap closure, long sleeve.  
Sizes: S - 5XL  
Case Pack: 30  
Case Weight: 10 lbs.



**Pants, Style 44301**

Tychem® SL pants - elastic waist.  
Sizes: S - 5XL  
Case Pack: 30  
Case Weight: 10 lbs



**Sleeve, Style 44850**

Tychem® SL sleeve, elastic wrist.  
Size: 18"  
Case Pack: 100 pr  
Case Weight: 8 lbs



**Hood, Style 44701**

Tychem® SL pullover hood, drawstring.  
Sizes: One size  
Case Pack: 100  
Case Weight: 12 lbs



**Shoe Cover, Style 44901**

Tychem® SL shoe cover, elastic top.  
Sizes: S/M, L/ XL  
Case Pack: 100 pr.  
Case Weight: 9 lbs



**Hood, Style 44713**

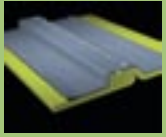
Tychem® SL pullover hood, elastic face.  
Sizes: One size  
Case Pack: 100  
Case Weight: 12 lbs.



**Boot Cover, Style 44903**

Tychem® SL boot cover, elastic top.  
Sizes: S/M, L/ XL  
Case Pack: 200 pr.  
Case Weight: 11 lbs.

**Heat Sealed Seams**



**Heat Sealed Seams**

heat sealed



**Coverall, Style 72110**

Tychem® SL coverall, collar, elastic wrists and ankles.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 6 lbs



**Coverall, Style 72120**

Tychem® SL coverall, hood, elastic face, open wrists and ankles.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 7 lbs



**Coverall, Style 73150**

Tychem® SL grey coverall, hood, elastic face, elastic wrists, attached boots.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 8 lbs



**Coverall, Style 72165**

Tychem® SL coverall, **respirator fit hood**, double storm flap with hook and loop closure, elastic wrists, attached boots with boot flaps.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 8 lbs.





**Coverall, Style 73130**

Tychem® SL grey coverall, hood, elastic face, wrists and ankles.

**Sizes:** S – 5XL

**Case Pack:** 6

**Case Weight:** 7 lbs



**Hood, Style 72712**

Tychem® SL hood, bell shape, 20 mil PVC faceshield, hook and loop straps under arm.

**Sizes:** One size

**Case Pack:** 6

**Case Weight:** 6 lbs



**Boots, Style 72740**

Tychem® SL boot covers, elastic at top.

**Sizes:** One size

**Case Pack:** 12 pair

**Case Weight:** 7 lbs.



**Encapsulated Suit, Style 72400**

Tychem® SL encapsulated suit (Level B), rear entry, flat back, 48" zipper, storm flap, 20 mil PVC faceshield, elastic wrists, 1 exhaust port with shroud, air tube inlet, attached sock boots with boot flaps.

**Sizes:** S – 5XL

**Case Pack:** 3

**Case Weight:** 7 lbs.

*Also available in rear entry, expanded back, item 72450, and front entry, expanded back, item 72440.*



**Hood, Style 72710**

Tychem® SL hood (pullover), bell shape, elastic face.

**Sizes:** One size

**Case Pack:** 12

**Case Weight:** 6 lbs.

**Sleeves, Style 72765**

Tychem® SL sleeves, elastic ends.

**Sizes:** 18" length

**Case Pack:** 12 pair

**Case Weight:** 6 lbs



**Apron, Style 72735**

Tychem® SL apron, bib style, knee length, ties at neck and waist.

**Sizes:** one size

**Case Pack:** 12

**Case Weight:** 8 lbs

# Tychem® F



## **Tychem® F Garments – A High Level of Protection Against Chemical and Biological Warfare Agents.**

Tychem® F represents a remarkable step forward in the provision of individual protection for both Armed Forces and Civilian Populations in areas where chemical and/or biological warfare could take place, or where there is a risk of contamination from an industrial accident.

Tychem® F provides a tough and safe barrier to all known chemical warfare agents in liquid, gas or aerosol formats and represents the first simple, economic and disposable material for individual protection suits.

### **Coverall, Style 60132**

Coverall, respirator-fit hood, storm flap, elastic face, wrists and ankles.

**Sizes:** S-5X

**Case Pack:** 6

**Case Weight:** 7 lbs.

# PERMEATION DATA

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	>480	0.06
Acetonitrile	L	157	0.19
Ammonia (gas)	G	79	0.76
1,3- Butadiene	G	>480	0.07
Carbon disulfide	L	>480	0.05
Chlorine gas	G	>480	0.2
Dichloromethane	L	immediate	8
Diethylamine	L	>480	<0.001
N,N-Dimethylformamide	L	>480	<0.01
Ethyl acetate	L	>480	<0.001
Ethylene oxide	G	65	1.4
n-Hexane	L	>480	<0.001
Hydrogen chloride	G	>480	<0.1
Methanol	L	77	0.26
Methyl chloride	G	>480	0.004
Nitrobenzene	L	>480	<0.001
Sodium hydroxide, 50%	L	>480	<0.1
Sulfuric acid (conc.)	L	>480	<0.1
Tetrachloroethylene	L	>480	<0.022
Tetrahydrofuran	L	484	0.12
Toluene	L	>480	0.003

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.

## Permeation Data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Avg. Break-through Time (min)	Minimum Detectable Permeation
GA	Tabun	77-81-6	DN5	nt	nt
			DN6	>720	< $2 \times 10^{-6}$
GB	Sarin	107-44-8	DN5	nt	nt
			DN6	>720	< $2 \times 10^{-6}$
GD	Soman	99-64-0	DN5	nt	nt
			DN6	>720	< $2 \times 10^{-6}$
HD	Sulfur Mustard	505-60-2	DN3	nt	nt
			DN4	>720	<0.002
L	Lewisite	541-25-3	DN3	nt	nt
			DN4	360	0.006
VX	VX	50782-69-9	DN5	nt	nt
			DN6	>720	< $2 \times 10^{-6}$

> = greater than, < = less than, nt = not tested

**Fabric Test Protocols.** All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22°C, 50% R.H.

Protocol DN3 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN4 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

Protocol DN5 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN6 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (total coverage).



### Coverall, Style 60151

Coverall, zipper front, attached respirator-fit hood, storm flap, elastic face and wrists, attached boots.

Sizes: S-5X

Case Pack: 6

Case Weight: 7 lbs.

**Tychem® F Quick Pic**

■ Tested against all chemical warfare agents

■ Used by military and civilian responders

# Tychem<sup>®</sup> 7500



## **Chemical Splash Protective Clothing.**

Tychem<sup>®</sup> 7500 chemical clothing from Lakeland Industries provides high tensile and burst strength while offering a high level of chemical splash protection. DuPont has engineered into Tychem<sup>®</sup> 7500 superior resistance to hydrocarbons found commonly in petrochemical plants and chemical clean-up operations. Tychem<sup>®</sup> 7500 is tested against WMD agents.

# P E R M E A T I O N   D A T A

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	433	0.16
Acetonitrile	L	14	180
Ammonia (gas)	G	125	0.5
1,3- Butadiene	G	>480	ND
Carbon disulfide	L	>480	ND
Chlorine gas	G	>480	ND
Dichloromethane	L	immediate	11
Diethylamine	L	>480	ND
N,N-Dimethylformamide	L	>480	ND
Ethyl acetate	L	>480	ND
Ethylene oxide	G	75	2.7
n-Hexane	L	>480	ND
Hydrogen chloride	G	195	0.33
Methanol	L	65	0.17
Methyl chloride	G	>480	ND
Nitrobenzene	L	>480	ND
Sodium hydroxide, 50%	L	>480	ND
Sulfuric acid (conc.)	L	>480	ND
Tetrachloroethylene	L	>480	ND
Tetrahydrofuran	L	316	0.19
Toluene	L	>480	ND

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.

## Permeation Data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Avg. Break-through Time	Minimum Detectable Permeation
GA	Tabun	77-81-6	DN5	nt	nt
			DN6	>12 hrs.	$< 2 \times 10^{-6}$
GB	Sarin	107-44-8	DN5	nt	nt
			DN6	>12 hrs.	$< 2 \times 10^{-6}$
GD	Soman	99-64-0	DN5	nt	nt
			DN6	>12 hrs.	$< 2 \times 10^{-6}$
HD	Sulfur Mustard	505-60-2	DN3	nt	nt
			DN4	>12 hrs.	<0.002
L	Lewisite	541-25-3	DN3	nt	nt
			DN4	6 hrs.	0.006
VX	VX	50782-69-9	DN5	nt	nt
			DN6	>12 hrs.	$< 2 \times 10^{-6}$

> = greater than, < = less than, nt = not tested

**Fabric Test Protocols.** All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22°C, 50% R.H.  
 Protocol DN3 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.  
 Protocol DN4 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (total coverage).  
 Protocol DN5 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.  
 Protocol DN6 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

## Tychem® 7500 Physical Properties

Basis Weight (oz/yd <sup>2</sup> )	.....3.7 (ASTM D3776-85)
Thickness (mils)	.....16 (ASTM D1777-64)
Mullen Burst (psi)	.....130 (ASTM D3786-87)
Breaking Strength	
Grab (md/xd)	.....64/51 lbs (ASTM D53034-90)
Tearing Strength	
Trapezoid (md/xd)	.....21/16 lbs (ASTM D1117-80)

**Warnings:**

1. Tychem® 7500 is not flame resistant and should not be used around heat, flame sparks, or in potentially flammable or explosive environments.
2. Garments made of Tychem® 7500 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.

## Tychem® 7500 Quick Pic

- Chemical Warfare Agent Tested
- Good "general purpose" material

# Sewn and Bound or Heat Sealed Seams

bound



**Sewn & Bound Seams**



**Coverall, Style 76100**

Tychem® 7500 coverall, collar, open wrists and ankles.  
**Sizes:** S – 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs  
*Also available in Sewn and Bound Seam, Style No. 75412*



**Coverall, Style 76110**

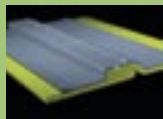
Tychem® 7500 coverall, collar, elastic wrists and ankles.  
**Sizes:** S – 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs  
*Also available in Sewn and Bound Seam, Style No. 75417*



**Coverall, Style 76115**

Tychem® 7500 coverall, collar, elastic wrists and attached boots.  
**Sizes:** S – 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs

sewn



**Heat Sealed Seams**

heat sealed



**Coverall, Style 76120**

Tychem® 7500 coverall, hood, elastic face, open wrists and ankles.  
**Sizes:** S – 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs



**Coverall, Style 76130**

Tychem® 7500 coverall, hood, elastic face, wrists and ankles.  
**Sizes:** S – 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs  
*Also available in Sewn and Bound Seam, Style No. 75428*



**Coverall, Style 76150**

Tychem® 7500 coverall, hood, elastic face and wrists, attached boots.  
**Sizes:** S – 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs



**Coverall, Style 76160**

Tychem® 7500 coverall, hood, elastic face and wrists, sock boots with boot flaps.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 8 lbs



**Coverall, Style 76165**

Tychem® 7500 coverall, respirator fit hood, double storm flap with hook and loop closure, elastic face and wrists, attached boots with boot flaps.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 8 lbs



**Coverall, Style 76166**

Tychem® 7500 coverall, respirator fit hood, elastic face, wrists and ankles.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 9 lbs



**Coverall, Style 76170**

Tychem® 7500 coverall, hood, elastic wrists with splash guards, sock boots with boot flaps.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 9 lbs



**Jacket, Style 76250**

Tychem® 7500 jacket, collar, zipper, elastic wrists, double storm flap with hook and loop closure.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 9 lbs



**Jacket, Style 76260**

Tychem® 7500 jacket, drawstring hood, zipper, elastic wrists, double storm flap with hook and loop closure.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 9 lbs



**Coverall, Style 76155**

Tychem® 7500 coverall, expanded back for SCBA, hood, elastic face and wrists, over boots.

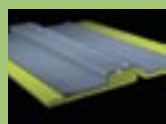
Sizes: S – 5XL

Case Pack: 6

Case Weight: 6 lbs



Side view of Style 76155 showing the expanded back.



Heat Sealed Seams

# heat sealed



### Pants, Style 76300

Tychem® 7500 pants, elastic waist, hemmed cuffs.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 9 lbs



### Pants, Style 76320

Tychem® 7500 pants, bib style, adjustable suspenders, hemmed cuffs.

Sizes: S – 5XL

Case Pack: 6

Case Weight: 9 lbs



### Encapsulated Suit, Style 76400

Tychem® 7500 encapsulated suit, rear entry, flat back, 48" zipper, storm flap, 20 mil PVC faceshield, elastic wrists, 1 exhaust port with shroud, air tube inlet, attached sock boots with boot flaps.

Sizes: S – 5XL

Case Pack: 3

Case Weight: 9 lbs



### Hood, Style 76710

Tychem® 7500 pullover hood, bell shape, elastic face.

Sizes: One Size

Case Pack: 12

Case Weight: 6 lbs



### Hood, Style 76714

Tychem® 7500 hood, short bib style, 20 mil PVC lens, 2" hook and loop closure straps under arms with 4" hook side straps.

Sizes: One Size

Case Pack: 6



### Hood, Style 76716

Tychem® 7500 hood, long bib style, 20 mil PVC lens, 2" hook and loop closure straps under arms with 4" hook side straps.

Sizes: One Size

Case Pack: 6



**Apron, Style 76735**

Tychem® 7500 apron, bib style, knee length, ties at neck and waist, 26" x 36".  
Sizes: One Size  
Case Pack: 12  
Case Weight: 8 lbs



**Encapsulated Suit, Style 76450**

Tychem® 7500 encapsulated suit, rear entry, expanded back, 48" zipper, double storm flap with hook and loop closure, 20 mil PVC faceshield, elastic wrists, 2 exhaust ports with shrouds, attached sock boots with boot flaps.  
Sizes: S – 5XL  
Case Pack: 3  
Case Weight: 9 lbs  
Also available as Front Entry, Style No. 75440.



**Apron, Style 76730**

Tychem® 7500 apron, long sleeve, 32" length, elastic wrists, hook and loop closure straps at neck, material ties in back.  
Sizes: S – 5XL  
Case Pack: 6  
Case Weight: 12 lbs



**Sleeves, Style 76765**

Tychem® 7500 sleeves, elastic ends.  
Sizes: 18" length  
Case Pack: 12 pair  
Case Weight: 8 lbs



**Boot Covers, Style 76740**

Tychem® 7500 boot covers, extends over calf, elastic at top.  
Sizes: S, M, L, XL  
Case Pack: 12 pair  
Case Weight: 7 lbs

# Tychem® BR



## **Tychem® BR. Chemical Protection and Enhanced Flexibility.**

Handling hazardous chemicals is a dangerous business. You need the most protection possible. That's where Tychem® BR fits in. Providing extensive protection, Tychem® BR is supported with a broad range of barrier documentation. In fact, Tychem® BR has been tested against more than 200 chemicals, including the ones most involved in industrial or HazMat incidents.

Lakeland Chemical protective clothing is known for offering excellent protection and value. Tychem® BR is another fine example. It offers the tear, puncture and abrasion resistance you deserve. Superior protection does not come at the expense of comfort. Tychem® BR garments are soft and lightweight, allowing workers to move with ease. Tychem® BR is ideal for a variety of work environments.

Tychem® BR is yellow for high visibility. Whether there is bright or dim light, Tychem® BR can be seen. That's why it is an excellent choice for HazMat teams.

# PERMEATION DATA

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	>480	<0.001
Acetonitrile	L	>480	<0.003
Ammonia (gas)	G	46	0.62
1,3- Butadiene	G	>480	<0.001
Carbon disulfide	L	>480	<0.001
Chlorine gas	G	>480	<0.01
Dichloromethane	L	432	0.06
Diethylamine	L	>480	<0.001
N,N-Dimethylformamide	L	>480	<0.001
Ethyl acetate	L	>480	<0.001
Ethylene oxide	G	>480	<0.01
n-Hexane	L	>480	<0.001
Hydrogen chloride	G	>480	<0.1
Methanol	L	157	0.81
Methyl chloride	G	>480	<0.001
Nitrobenzene	L	>480	<0.001
Sodium hydroxide, 50%	L	>480	<0.01
Sulfuric acid (conc.)	L	>480	<0.01
Tetrachloroethylene	L	>480	<0.001
Tetrahydrofuran	L	>480	<0.001
Toluene	L	>480	<0.001

ND = None Detected, > = greater than, L = liquid, G = gas

## Permeation Data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Avg. Breakthrough Time	Minimum Detectable Permeation
GA	Tabun	77-80-6	DN5	>12 hrs.	<0.0001
GB	Sarin	107-44-8	DN5	>12 hrs.	<0.0001
			DN6	>12 hrs.	<0.0001
GD	Soman	99-64-0	DN5	>12 hrs.	<0.0001
			DN6	nt	nt
HD	Sulfur Mustard	505-60-2	DN3	>12 hrs.	<1.000
			DN4	>12 hrs.	<1.000
L	Lewisite	541-25-3	DN3	>12 hrs.	<0.060
			DN4	2 hrs.	<0.042
VX	VX	50782-69-9	DN5	>12 hrs.	<0.0001
			DN6	>12 hrs.	<0.0001

> = greater than, < = less than, nt = not tested

**Fabric Test Protocols.** - All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22°C, 50% R.H.

Protocol DN3 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN4 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

Protocol DN5 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN6 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

## Tychem® BR Physical Properties

Basis Weight (oz/yd <sup>2</sup> )	.....6.6 (ASTM D3776)
Thickness (mils)	.....16 (ASTM D1777)
Ball Burst (lbf)	.....90 (ASTM D3787-89)
Grab Tensile(lbf)	.....90/84 lbs (ASTM D5034)
Trap Tear (lbf)	.....19/19 lbs (ASTM D5597)

# LEVEL A



### Tychem® BR670

Fully encapsulated rear entry vapor-protective suit (Level A), expanded back, sealed seam on outside, 48" zipper, double storm flap with hook and loop closure, 40 mil PVC face shield, butyl gloves, 2 exhaust valves, attached sock boots with boot flaps, 1.5" waist belt with 3 belt loops sewn (inside) and sealed.

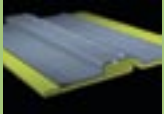
**Sizes:** S - 5XL

**Case Pack:** 1

**Case Weight:** 8 lbs.

Also available as front entry, style number BR660.

Storage bag included.



**Heat Sealed Seams**



**Tychem® BR100**

Coverall, collar, open wrists and ankles.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 8 lbs



**Tychem® BR110**

Coverall, collar, elastic wrists and ankles.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 8 lbs



**Tychem® BR115**

Coverall, collar, elastic wrists and overboots, 5" storm flap.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 8 lbs



**Tychem® BR130**

Coverall, hood, elastic face, open wrists and ankles.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 8 lbs

**Tychem® BR Quick Pic**

- Heavy chemical splash protection
- Flexible and lightweight
- High-visibility
- Superior fabric strength
- Chemical Warfare Agent tested



**Tychem® BR140**

Coverall, hood, elastic face, open wrists and attached boots.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 8 lbs



**Tychem® BR150**

Coverall, hood, elastic face, elastic wrists, attached boots.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 8 lbs



**Tychem® BR155**

Coverall, expanded back for SCBA, elastic face and wrists, overboots.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 9 lbs



**Tychem® BR165**

Coverall, **respirator fit hood**, double storm flap with hook and loop closure, elastic face and wrists and attached sock boots with boot flaps.  
Sizes: S - 5XL  
Case Pack: 6  
Case Weight: 9 lbs



**Tychem® BR170**

Coverall, hood, elastic face and wrists with splash guards, sock boots with boot flaps.  
**Sizes:** S - 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs



**Tychem® BR735**

Apron, bib style, knee length, ties at neck and waist.  
**Sizes:** 26" - 36"  
**Case Pack:** 12  
**Case Weight:** 9 lbs



**Tychem® BR250**

Jacket, Collar, zipper, elastic wrists, double storm flap with hook and loop closure.  
**Sizes:** S - 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs



**Tychem® BR300**

Pants, elastic waist, hemmed cuffs.  
**Sizes:** S - 5XL  
**Case Pack:** 6  
**Case Weight:** 9 lbs



**Tychem® BR400**

Encapsulated suit, (level B), rear entry, flat back, 48" zipper, storm flap, 20 mil PVC face shield, elastic wrists, 1 exhaust port with shroud, air tube inlet, attached sock boots with boot flap.  
**Sizes:** S - 5XL  
**Case Pack:** 6  
**Case Weight:** 8 lbs



**Tychem® BR450**

Encapsulated suit, (level B), rear entry, expanded back, 48" zipper, storm flap, 20 mil PVC face shield, elastic wrists, 2 exhaust ports with shroud, attached sock boots with boot flap.  
**Sizes:** S - 5XL  
**Case Pack:** 1  
**Case Weight:** 9 lbs  
*Also Available as front entry suit, style BR440.*



**Tychem® BR765**

18" sleeves with elastic ends  
**Sizes:** 18" Length  
**Case Pack:** 12 pair  
**Case Weight:** 10 lbs



**Tychem® BR740**

Boot covers that extend over the calf, elastic at top.  
**Sizes:** One size  
**Case Pack:** 12 pair  
**Case Weight:** 10 lbs



**Tychem® BR714**

Hood, short bib style, 20 mil PVC lens, 2" hook and loop closure straps under arms with 4" hook side straps.  
**Sizes:** One size  
**Case Pack:** 6  
**Case Weight:** 8 lbs

heat sealed

# Tychem® LV



## **Tychem® LV. Low-Visibility Chemical Protection and Enhanced Flexibility.**

Handling hazardous chemicals is a dangerous business. You need the most protection possible. That's where Tychem® LV fits in. Providing extensive protection, Tychem® LV is supported with a broad range of barrier documentation. In fact, Tychem® LV has been tested against more than 200 chemicals, including the ones most involved in industrial or HazMat incidents.

Lakeland Chemical protective clothing is known for offering excellent protection and value. Tychem® LV is another fine example. It offers the tear, puncture and abrasion resistance you deserve. Superior protection does not come at the expense of comfort. Tychem® LV garments are soft and lightweight, allowing workers to move with ease. Tychem® LV is ideal for a variety of work environments. Tychem® LV is olive drab for low visibility.

### **Tychem® LV Physical Properties**

Basis Weight (oz/yd2) .....	6.6 (ASTM D3776)
Thickness (mils) .....	16 (ASTM D1777)
Ball Burst (lbf) .....	90 (ASTM D3787-89)
Grab Tensile (lbf) .....	42/45 (ASTM D5034)*
Trap Tear (lbf) .....	19/19 (ASTM D5597)*

\* MD/CD

### **Tychem® LV130 Coverall**

Coverall, hood, elastic face, wrists and ankles.

**Sizes:** S-5X

**Case Pack:** 6

**Case Weight:** 8 lbs.

heat sealed

# PERMEATION DATA

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	>480	<0.001
Acetonitrile	L	>480	<0.003
Ammonia (gas)	G	46	0.62
1,3- Butadiene	G	>480	<0.001
Carbon disulfide	L	>480	<0.001
Chlorine gas	G	>480	<0.01
Dichloromethane	L	432	0.06
Diethylamine	L	>480	<0.001
N,N-Dimethylformamide	L	>480	<0.001
Ethyl acetate	L	>480	<0.001
Ethylene oxide	G	>480	<0.01
n-Hexane	L	>480	<0.001
Hydrogen chloride	G	>480	<0.1
Methanol	L	157	0.81
Methyl chloride	G	>480	<0.001
Nitrobenzene	L	>480	<0.001
Sodium hydroxide, 50%	L	>480	<0.01
Sulfuric acid (conc.)	L	>480	<0.01
Tetrachloroethylene	L	>480	<0.001
Tetrahydrofuran	L	>480	<0.001
Toluene	L	>480	<0.001

ND = None Detected, > = greater than, L = liquid, G = gas

## Permeation Data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Avg. Breakthrough Time	Minimum Detectable Permeation
GA	Tabun	77-80-6	DN5	>12 hrs.	<0.0001
GB	Sarin	107-44-8	DN5	>12 hrs.	<0.0001
			DN6	>12 hrs.	<0.0001
GD	Soman	99-64-0	DN5	>12 hrs.	<0.0001
			DN6	nt	nt
HD	Sulfur Mustard	505-60-2	DN3	>12 hrs.	<1.000
			DN4	>12 hrs.	<1.000
L	Lewisite	541-25-3	DN3	>12 hrs.	<0.060
			DN4	2 hrs.	<0.042
VX	VX	50782-69-9	DN5	>12 hrs.	<0.0001
			DN6	>12 hrs.	<0.0001

> = greater than, < = less than, nt = not tested

**Fabric Test Protocols-** All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22°C, 50% R.H.

Protocol DN3 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN4 – MIL-Std-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

Protocol DN5 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN6 – MIL-Std-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (total coverage).

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### Tychem® LV150 Coverall

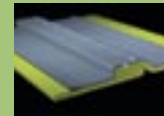
Coverall, hood, elastic face, elastic wrists, attached boots.

Sizes: S-5X

Case Pack: 6

Case Weight: 8 lbs.

Heat Sealed Seams



### Tychem® LV151 Coverall

Coverall, respirator fit hood, elastic face and wrists, attached boots.

Sizes: S-5X

Case Pack: 6

Case Weight: 8 lbs.

### Tychem® LV Quick Pic

- Heavy chemical splash protection
- Flexible and lightweight
- Low-visibility
- Superior fabric strength
- Chemical Warfare Agent tested
- Same material as Tychem® BR but low-visibility

# Tychem® TK



## **Tychem® TK.**

### **Superior Chemical Protective Clothing from Lakeland.**

Tychem® TK is the best protection you can wear in hazardous chemical environments. This line of chemical protective clothing is especially suited for protection against toxic, corrosive gases, liquids and solid chemicals. Developed by DuPont, Tychem® TK can be found in industrial, hazmat and domestic preparedness applications. They offer dependable protection with performance that has been proven over a wide range of chemicals.

Tychem® TK garments are extremely durable and puncture resistant. The chemical barrier properties of TK have been tested against 284 challenge chemicals. Permeation data proves the excellent protective capabilities of Tychem® TK. Lakeland's Tychem® TK garments are all lime-yellow in color, highly visible in both bright and dim light. Easily seen in hazy or smoky environments, this line-up of chemical protective clothing is the first line of defense in hazardous material situations.



# PERMEATION DATA

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

Chemical Name	Physical Phase	Normalized Breakthrough Time (min.)	Average Permeation Rate ( $\mu\text{g}/\text{cm}^2/\text{min}$ )
Acetone	L	>480	<0.01
Acrylonitrile	L	>480	<0.0003
Ammonia Gas	G	>480	<0.1
1, 3-Butadiene	G	>480	<0.07
Carbon disulfide	L	>480	<0.02
Chlorine Gas	G	>480	<0.02
Dichloromethane	L	>480	<0.03
Dimethylamine	G	>480	<0.05
N, N-Dimethylacetamide	L	>480	<0.006
Ethyl Acetate	L	>480	<0.06
Ethylene Oxide Gas	G	>480	<0.1
n-Hexane	L	>480	<0.01
Hydrogen Chloride	G	>480	<0.1
Methanol	L	>480	<0.1
Methyl chloride	G	>480	<0.02
Nitrobenzene	L	>480	<0.1
Sodium hydroxide, 50%	L	>480	<0.1
Sulfuric acid, 98%	L	>480	<0.1
Tetrachloroethylene	L	>480	<0.01
Tetrahydrofuran	L	>480	<0.04
Toluene	L	>480	<0.02

> = greater than, < = less than

For the latest permeation data, go to the DuPont website at [www.dupontprotectiveapparel.com](http://www.dupontprotectiveapparel.com).

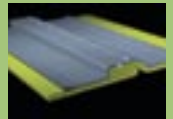
For specific permeation data and breakthrough times for other chemicals, contact the DuPont Protective Apparel Fax-On-Demand Service at 1-800-558-9329.

### Tychem® TK Physical Properties

- Basis Weight (oz/yd<sup>2</sup>). . . . . 10.6 (ASTM D3776)
- Thickness (mils). . . . . 26 (ASTM D1777)
- Ball Burst (lbf) . . . . . 187 (ASTM D3787)
- Grab Tensile (lbf) . . . . . 188/180 (ASTM D5034)\*
- Trap Tear (lbf). . . . . 53/52 (ASTM D5733)\*

\* MD/CD

Heat Sealed Seams



## Permeation data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Avg. Breakthrough Time	Minimum Detectable Permeation ( $\mu\text{g}/\text{cm}^2$ )
GA	Tabun	77-80-6	DN5	>12 hrs.	<0.0001
GB	Sarin	107-44-8	DN5	> 12 hrs.	<0.0001
			DN6	>12 hrs.	<0.00024
GD	Soman	99-64-0	DN 5	>12 hrs.	<0.0001
			DN 6	>12 hrs.	<0.0001
HD	Sulfur Mustard	505-60-2	DN3	> 12 hrs.	<0.0001
			DN4	> 12 hrs.	<0.2000
L	Lewisite	541-25-3	DN3	> 12 hrs.	<0.0060
			DN4	> 12 hrs.	<0.2000
VX	VX	50782-69-9	DN5	>12 hrs.	<0.0001
			DN6	>12 hrs.	<0.00024

> = greater than, < = less than

Fabric Test Protocols – All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22° C, 50% R.H.

Protocol DN3 – MIL STD-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN4 – MIL STD-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (Total coverage).

Protocol DN5 – MIL STD-282, Method T-209 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN6 – MIL STD-282, Method T-209 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (Total coverage).

### Tychem® TK Quick Pic

- >480 minute resistance to ASTM F1001 test battery
- >12 hour resistance to chemical warfare agent
- Highest level of protection amongst all Tychem® fabrics



**Tychem® TK 660 Standard Level A Suit**

Fully encapsulated front entry vapor-protective suit (Level A), expanded back, sealed seam on outside only, 48" gas tight zipper, double storm flap with hook and loop closure, 40 mil PVC faceshield, Butyl® gloves, 2 exhaust valves, attached sock boots with boot flaps, 1.5" waist belt with 3 belt loops sewn (inside) and sealed. Storage bag included.  
**Sizes:** S - 5X  
**Case Pack:** 1  
**Case Weight:** 10 lbs.  
*Also available as rear entry Style TK670.*



*Detail of expanded back on style numbers TK660 and TK650.*



**Tychem® TK 620 Standard Level A Encapsulated Suit**

Flat back front entry vapor-protective suit (Level A), sealed seam on outside only, 48" gas tight zipper, double storm flap with hook and loop closure, 40 mil PVC faceshield, Butyl® gloves, 2 exhaust valves, attached sock boots with boot flaps, 1.5" waist belt with 3 belt loops sewn (inside) and sealed. Storage bag included.  
**Sizes:** S - 5X  
**Case Pack:** 1  
**Case Weight:** 10 lbs.  
*Also available as rear entry Style TK630.*



**Tychem® TK 650 Deluxe Level A Suit**

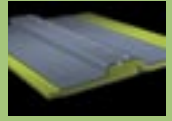
Fully encapsulated rear entry vapor-protective suit (Level A), expanded back, sealed seam plus inside and out, 48" gas tight zipper, double storm flap with hook and loop closure, 2 layer faceshield (10 mil Teflon®/40 mil PVC), 3 layer glove combination of Butyl®, North Silvershield®, and outer knit Kevlar®, 2 exhaust valves, attached sock boots with boot flaps, 1.5" waist belt with 3 belt loops sewn (inside) and sealed. Storage bag included.  
**Sizes:** S - 5X  
**Case Pack:** 1  
**Case Weight:** 10 lbs.  
*Also available as front entry Style TK640.*



**Tychem® TK 640W Deluxe Wide-View Level A Suit**

Fully encapsulated front entry vapor-protective suit (Level A), expanded back, sealed seam plus inside and out, 48" gas tight zipper, double storm flap with hook and loop closure, 2 layer **wide-view** faceshield (10 mil Teflon®/40 mil PVC), 3 layer glove combination of Butyl®, North Silvershield®, and outer knit Kevlar®, 2 exhaust valves, attached sock boots with boot flaps, 1.5" waist belt with 3 belt loops sewn (inside) and sealed. Storage bag included.  
**Sizes:** S - 5X  
**Case Pack:** 1  
**Case Weight:** 10 lbs.  
*Also available as rear entry Style TK650W.*

**Heat Sealed Seams Plus**



# Heat Sealed Seams Plus



**Tychem® TK400 Encapsulated Suit**

Encapsulated suit (Level B), rear entry, flat back, 48" zipper, storm flap, 20 mil PVC faceshield, elastic wrists, 1 exhaust port with shroud, air tube inlet, attached sock boots with boot flaps.

**Sizes:** S - 5X  
**Case Pack:** 1  
**Case Weight:** 5 lbs.



**Tychem® TK450 Encapsulated Suit**

Encapsulated suit (Level B), rear entry, expanded back, 48" zipper, storm flap, 20 mil PVC faceshield, elastic wrists, 2 exhaust ports with shroud, attached sock boots with boot flaps.

**Sizes:** S - 5X  
**Case Pack:** 1  
**Case Weight:** 5 lbs.  
*Also available as front entry suit, style TK440.*



**Tychem® TK100 Coverall**

Coverall, collar, open wrists and ankles.

**Sizes:** S - 5X  
**Case Pack:** 3  
**Case Weight:** 15 lbs.



**Tychem® TK110 Coverall**

Coverall, collar, elastic wrists and ankles.

**Sizes:** S - 5X  
**Case Pack:** 3  
**Case Weight:** 15 lbs.



**Tychem® TK115 Coverall**

Coverall, collar, elastic wrists and overboots, 5" storm flap.

**Sizes:** S - 5X  
**Case Pack:** 3  
**Case Weight:** 15 lbs.



**Tychem® TK120 Level B Coverall**

Coverall, hood, elastic face, open wrists and ankles.

**Sizes:** S - 5X  
**Case Pack:** 3  
**Case Weight:** 15 lbs.



**Tychem® TK130  
Level B Coverall**

Coverall, hood, elastic face, wrists and ankles.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 15 lbs.



**Tychem® TK140  
Level B Coverall**

Coverall, hood, elastic face, open wrists and attached boots.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 16 lbs.



**Tychem® TK150  
Level B Coverall**

Coverall, hood, elastic face, elastic wrists, attached boots.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 16 lbs.



**Tychem® TK155  
Level B Coverall**

Coverall, expanded back for SCBA, elastic face and wrists, overboots.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 16 lbs.



**Tychem® TK160  
Level B Coverall**

Coverall, hood, elastic face, elastic wrists, attached boots with boot flaps.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 16 lbs.



**Tychem® TK165  
Level B Coverall**

Coverall, **respirator fit hood**, double storm flap with hook and loop closure, elastic face and wrists, attached boots with boot flaps.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 8 lbs.



**Tychem® TK166  
Level B Coverall**

Coverall, **respirator fit hood**, double storm flap with hook and loop closure, elastic face, wrists and ankles.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 17 lbs.



**Tychem® TK170  
Level B Coverall**

Coverall, hood, elastic face and wrists with splash guards, sock boots with boot flaps.  
Sizes: S - 5X  
Case Pack: 3  
Case Weight: 12 lbs.



**Tychem® TK250 Jacket**

Jacket, collar, zipper, elastic wrists, double storm flap with hook and loop closure.

Sizes: S - 5X

Case Pack: 6

Case Weight: 12 lbs.



**Tychem® TK300 Pants**

Pants, elastic waist, hemmed cuffs.

Sizes: S - 5X

Case Pack: 6

Case Weight: 12 lbs.



**Tychem® TK320 Bib Pants**

Bib pants with suspenders, hemmed cuffs.

Sizes: S - 5X

Case Pack: 6

Case Weight: 15 lbs.



**Tychem® TK730 Apron**

Apron, long sleeves, elastic wrists, hook and loop straps at neck, ties in back.

Sizes: 32" Length

Case Pack: 12

Case Weight: 12 lbs



**Tychem® TK735 Bib Apron**

Apron, bib style, knee length, ties at neck and waist. 26" wide x 36" length.

Sizes: 26" X 36"

Case Pack: 12

Case Weight: 10 lbs.

**Tychem® TK260 Jacket**

Jacket, drawstring hood, zipper, elastic wrists, double storm flap with hook and loop closure.

Sizes: S - 5X

Case Pack: 6

Case Weight: 12 lbs.





**Tychem® TK710 Hood**

Pullover hood, bell shape, elastic face.

**Sizes:** One size

**Case Pack:** 12

**Case Weight:** 8 lbs.



**Tychem® TK714 Hood**

Hood, short bib style, 20 mil PVC lens, 2" hook and loop closure straps under arms with 4" hook side straps.

**Sizes:** One size

**Case Pack:** 6

**Case Weight:** 9 lbs.



**Tychem® TK740 Boot Covers**

Boot covers that extend over calves, elastic at top.

**Sizes:** One size

**Case Pack:** 12 pr.

**Case Weight:** 9 lbs.



**Tychem® TK765 Sleeves**

18" sleeves with elastic ends.

**Sizes:** 18" Length

**Case Pack:** 12

**Case Weight:** 8 lbs.

**T R A I N I N G   S U I T S**

Staying safe in a hazmat environment relies upon your equipment and training. These Lakeland training suits offer an economical way to learn the do's and don'ts of hazmat procedures without using expensive certified encapsulated suits. **Warning! These suits are for training use only. They are not vapor proof and do not offer any protection in Level A or Level B hazmat environments.**



**Nylon Encapsulated Training Suit Style 95494**

This suit is constructed of nylon and is put together with sewn seams...a very low-cost alternative for the training environment. Suit has rear entry, expanded back, 20 mil PVC faceshield, single storm flap, gloves, 2 exhaust ports and attached sock boots.

**Sizes:** S - 5XL

**Case Pack:** 1

**Case Weight:** 8 lbs.

*Available in front entry configuration also, style number 95493.*



**Tychem® TK495 Encapsulated Training Suit**

Encapsulated training suit, sealed seams for extra strength, front entry, expanded back, 20 mil PVC faceshield, gloves, attached sock boots with boot flaps.

**Sizes:** S - 5X

**Case Pack:** 1

**Case Weight:** 8 lbs.

*Available in rear entry also, style number TK490.*

## OPTIONS AND ACCESSORIES



### 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.



### Seal-tight® Glove System – Option G5

This pressure fit glove system works with cones to make installation easier than ever. *Note: This option is for Level B use only. Use the Quick Disconnect Option G7 for Level A use.*



### 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!



### 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. 00019 – Universal test kit for DuPont/Lakeland Level A and NFPA Certified suits

## OPTIONS FOR LEVEL A AND B CHEMICAL SUITS

Style	Description
A1	Add 1 side air tube
B1	Add hook and loop to boot flaps
B2	Add boot flaps
F1	Add 10 mil Teflon® faceshield
F3	Add 20 mil PVC faceshield
F4	Add 40 mil PVC faceshield
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 (not NIOSH approved)
P4	Survivair® pass-thru with Hanson® fittings
P6	Draegar® pass-thru with Hanson® fittings
P7	Draegar® pass-thru with Foster® fittings
P8	Draegar® pass-thru with Snap Tite® fittings
P9	MSA® Dual Purpose® pass-thru with Hanson® fittings
P10	MSA® Quick Fill® pass-thru
P13	North® pass-thru with snap fittings
P14	North® pass-thru with Hanson® fittings
P17	MSA® Dual Purpose® pass-thru with brass Foster® fittings
P18	MSA® Wall-thru unit
R2	Reinforce crotch and elbows
R3	Reinforce crotch
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

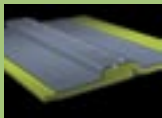
## ACCESSORIES FOR LEVEL A AND B CHEMICAL SUITS

Style	Description
<b>Gloves</b>	
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
<b>Boot Covers and Boots</b>	
00045	Bata Hazmax® boots (NFPA Certified)
00046	Tingley Hazproof® Boots
<b>Cooling Vest</b>	
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
<b>Storage Bags</b>	
00750	Level A storage bag
00760	Lakeland Utility Bag (Small)
00770	Lakeland Utility Bag (Large)
<b>Valves</b>	
00014	Exhaust Valve

# NFPA 1991 Certified Garments

NFPA 1991 is the Standard on Vapor Protective Ensembles for Hazardous Materials Emergencies.

Now available  
in wide-view  
lens system!



Heat  
Sealed  
Seams  
Plus



## Tychem® TK 645 NFPA 1991 Ensemble

Fully encapsulated front entry vapor-protective suit (Level A), expanded back, sealed seam plus inside and out, 48" zipper, double storm flap with hook and loop closure, 2 layer faceshield (10 mil Teflon®/40 mil PVC), 3 layer glove combination of Viton®, North Silvershield®, and outer knit Kevlar®, 3 exhaust valves, attached sock boots with boot flaps, 1.5" waist belt with 3 belt loops sewn (inside) and sealed. Includes aluminized fiberglass overcover. Storage bag and Bata Hazmax® boots included.

**Sizes:** S - 5X

**Case Pack:** 1

**Case Weight:** 30 lbs.

*Also available in rear entry Style TK655*



NFPA 1991  
certified to  
current edition.





**Tychem® TK644W NFFPA 1994 Class I Ensemble**

Fully encapsulated front entry vapor-protective suit (Level A), expanded back, sealed seam plus inside and out, 48" gas tight zipper, double storm flap with hook and loop closure, 2 layer wide-view faceshield (10 mil Teflon®/40mil PVC), 3 layer glove combination of Viton, North Silvershield® and outer knit Kevlar®, 3 exhaust valves, attached sock boots with Silvershield® boot flaps, 1.5" waist belt with 3 loops sewn (inside) and sealed. Storage bag included.

**Sizes:** S-5X  
**Case Pack:** 1  
**Case Weight:** 10 lbs.  
*Must be worn with NFFPA Certified boots.*



*Also available in standard lens, part number TK644 or TK654.*

# NFFPA 1994 Certified Garments

NFFPA 1994 is the Standard for Protective Ensembles for Chemical/Biological Terrorism Incidents.

**Class I Ensembles**

Class I Ensembles offer the highest level of protection. They are intended for the worst case circumstances, where the substance involved creates an immediate threat, is unidentified, and of unknown concentration. Such situations would occur where there is still an on-going release with likely gas/vapor exposure, the responder is close to the point of release, and most victims in the area appear to be unconscious or dead from exposure. Stay times in the hazard zone are likely to be short and limited to the breathing air available from the SCBA.

**Class III Ensembles**

Class III ensembles offer the lowest level of protection. They are intended for use well after the release has occurred or in the peripheral zone of the release scene for such functions as decontamination, patient care, crowd control, and clean-up. Class 3 ensembles should only be used when there is no potential for vapor or gas exposure and exposure to liquids is expected to be incidental through contact with contaminated surfaces. Class 3 ensembles must cover the individual and it is preferred that this clothing also cover the wearer's respirator to limit its potential for contamination. Because these ensembles are intended for longer wearing periods, the use of air-purifying respirators with these suits is likely.



**Tychem® LV980 NFFPA 1994 Class III Ensemble**

Coverall with collar, zipper, double storm flap with hook and loop closure, sock boots with boot flaps, glove ring and clamp assembly with attached 3-layer glove system, North Silvershield® (inner) Viton® (middle) Knit Kevlar® (outer) gloves. Includes separate bib-style hood with 10 mil Teflon® outer/40 mil PVC inner lens, wide-vision lens system, 1" adjustable waist belt. *Also available in Tychem BR.*

**Sizes:** S-5X  
**Case Pack:** 1  
**Case Weight:** 10 lbs.  
*Must be worn with NFFPA Certified boots.*

Phase Change

# COOL VEST®

by Lakeland Industries



**Adjustable straps make a comfortable fit!**



**COOL VESTS® ARE COOL!**



## **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®  
Style 00058 – Nomex® Cool Vest®  
Style 00056 – Banox (FR Cotton)



# Tychem Permeation Data

## Permeation data for ASTM recommended list of chemicals for evaluating protective clothing materials (ASTM F1001) Standardized Breakthrough Times

Sub-Class	Chemical Name	Physical Phase	CAS number	Tychem® QC	Tychem® SL	Tychem® 7500	Tychem® F	Tychem® BR/ Tychem® LV	Tychem® TK
391	Acetone	L	67-64-1	imm.	12	433	>480	>480	>480
431	Acetonitrile	L	75-05-8	imm.	12	14	157	>480	>480
350	Ammonia Gas	G	7664-41-7	imm.	32	125	79	46	>480
296	1, 3-Butadiene	G	106-99-0	imm.	>480	>480	>480	>480	>480
502	Carbon disulfide	L	75-15-0	imm.	imm.	>480	>480	>480	>480
330/350	Chlorine gas	G	7782-50-5	imm.	>480	>480	>480	>480	>480
261	Dichloromethane	L	75-09-2	imm.	imm.	imm.	imm.	432	>480
142	Diethylamine	L	109-89-7	imm.	12	>480	>480	>480	>480
132	N,N-Dimethylformamide	L	68-12-2	imm.	95	>480	>480	>480	>480
222	Ethyl acetate	L	141-78-6	imm.	14	>480	>480	>480	>480
275	Ethylene oxide gas	G	75-21-6	imm.	imm.	75	65	>480	>480
291	n-Hexane	L	110-54-3	imm.	10	>480	>480	>480	>480
350	Hydrogen chloride gas	G	7647-01-0	imm.	>480	195	>480	>480	>480
311	Methanol	L	67-56-1	imm.	>480	65	77	157	>480
261	Methyl chloride	G	74-87-3	imm.	>480	>480	>480	>480	>480
441	Nitrobenzene	L	98-95-3	imm.	102	>480	>480	>480	>480
380	Sodium hydroxide, 50%	L	1310-73-2	>480	>480	>480	>480	>480	>480
370	Sulfuric acid, 98%	L	7664-93-9	>480	>480	>480	>480	>480	>480
264	1,1,2,2-Tetrachloroethylene	L	127-18-4	imm.	imm.	>480	>480	>480	>480
241	Tetrahydrofuran	L	109-99-9	imm.	imm.	314	464	>480	>480
292	Toluene	L	109-88-3	imm.	imm.	>480	>480	>480	>480

> = greater than, < = less than, imm. = immediate (<10 minutes), L = Liquid, G = Gas

## Permeation data for 595 Class/Subclass Chemical Warfare Agents

Agent	Common Name	CAS Number	Protocol	Tychem® SL	Tychem® 7500	Tychem® F	Tychem® BR/ Tychem® LV	Tychem® TK
GA	Tabun	77-81-6	DN5	nt	nt	nt	>720 8 x 10 <sup>-7</sup>	>720 8 x 10 <sup>-7</sup>
			DN6	nt	>720 2 x 10 <sup>-8</sup>	>720 2 x 10 <sup>-8</sup>	nt	>720 4 x 10 <sup>-7</sup>
GB	Sarin	107-44-8	DN5	360 1 x 10 <sup>-5</sup>	nt	nt	>720 4.2 x 10 <sup>-7</sup>	>720 4.2 x 10 <sup>-7</sup>
			DN6	nt	>720 2 x 10 <sup>-8</sup>	>720 2 x 10 <sup>-8</sup>	>720 4 x 10 <sup>-4</sup>	>720 1 x 10 <sup>-8</sup>
GD	Soman	99-64-0	DN5	nt	nt	nt	>720 4.2 x 10 <sup>-7</sup>	>720 2.1 x 10 <sup>-7</sup>
			DN6	nt	>720 2 x 10 <sup>-8</sup>	>720 2 x 10 <sup>-8</sup>	nt	>720 4 x 10 <sup>-7</sup>
HD	Sulfur Mustard	505-60-2	DN3	180 0.002	nt	nt	>720 4.2 x 10 <sup>-7</sup>	>720 0.00021
			DN4	nt	>720 <0.002	>720 <0.002	>720 8 x 10 <sup>-4</sup>	>720 8 x 10 <sup>-4</sup>
L	Lewisite	541-25-3	DN3	>360 8 x 10 <sup>-4</sup>	nt	nt	>720 2.5 x 10 <sup>-5</sup>	>720 0.0000125
			DN4	nt	360 0.006	360 0.006	120 7 x 10 <sup>-5</sup>	>720 8 x 10 <sup>-4</sup>
VX	VX Nerve Agent	20785-69-9	DN5	>720 5 x 10 <sup>-7</sup>	nt	nt	>720 4.2 x 10 <sup>-7</sup>	>720 2.1 x 10 <sup>-7</sup>
			DN6	nt	>720 2 x 10 <sup>-8</sup>	>720 2 x 10 <sup>-8</sup>	>720 8 x 10 <sup>-7</sup>	>720 8 x 10 <sup>-7</sup>

Fabric Test Protocols – All tests performed in triplicate for DuPont Nonwovens by an independent accredited laboratory at 22° C, 50% R.H.

Protocol DN3 – MIL STD-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN4 – MIL STD-282, Method T-209 (HD) or modified for Lewisite, for 12 hours at 100 g/m<sup>2</sup> (Total coverage).

Protocol DN5 – MIL STD-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 10 g/m<sup>2</sup>.

Protocol DN6 – MIL STD-282, Method T-208 (GB) or modified for GA, GD, and VX, for 12 hours at 100 g/m<sup>2</sup> (Total coverage).

# Hand and Arm Protection

**ShurRite®**

**KutBuster®**

**DextraGard®**

**Grapolator®**

**Thermbar®**

**Crocskins®**

**DesPro™**

**DesPro™ Plus**

**GleamClean™**

**DinoHyde™**

**SpiderGrip™**

**Patterns**

**Blends**

**Sleeves**





# ShurRite®

## Modern Protective Armor! ShurRite® Gloves and Sleeves!

Lakeland ShurRite® safety gloves and sleeves made with DuPont® 100% Kevlar® aramid fiber provide excellent cut resistance for hand and arm protection products. ShurRite® offers outstanding cut resistance combined with intermittent heat resistance without affecting their wearers manual dexterity. These tough gloves and sleeves will outlast cotton, leather and coated gloves many times over. They greatly reduce potential injuries to workers hands and contribute to reducing accident claims and insurance costs. Available in various grip-enhancing coatings and patterns.

And, where additional protection from heat is required, ShurRite® Kevlar® Terry gloves are the answer. The terry loop construction provides a cushion of air that insulates against high temperature extremes, while Kevlar® adds the cut/slash protection.

### ShurRite® Applications

Metal Handling  
Automotive  
Aerospace  
Assembly  
Lumber and Paper  
Office Furniture Manufacturing  
Heating and Air Conditioning  
Manufacturing  
Wire and Cable Industries

### ShurRite® Features

- Cut Resistant
- Heat Resistant
- Chemical Resistant (organic solvents, diluted acids)
- Lightweight
- Excellent dexterity and flexibility
- Breathable
- Washable

## ShurRite® Gloves

Style No.	Description	Case Pack	Size
2100	100% Kevlar® mens knit glove	25 dozen	S, M, L
2110	100% Kevlar® ladies knit glove	25 dozen	S, M, L
2100 OF	100% Kevlar® open finger mens knit glove	25 dozen	S, M, L
2110 OF	100% Kevlar® open finger ladies knit glove	25 dozen	S, M, L

### Lightweight Styles

2200	13 gauge 100% Kevlar® mens knit glove	25 dozen	S, M, L
2210	13 gauge 100% Kevlar® ladies knit glove	25 dozen	S, M, L

### Terry Gloves

2300	100% Kevlar® Terry Seamless mens knit glove, drop cuff, loop in	25 dozen	S, M, L
2310	100% Kevlar® Terry Seamless ladies knit glove, drop cuff, loop in	25 dozen	S, M, L

## Sleeves

Style No.	Description	Case Pack	Size
4102	100% Kevlar®, 2 ply sleeve, 3" width	288 each	10"
4122	100% Kevlar®, 2 ply sleeve, 3" width	288 each	12"
4142	100% Kevlar®, 2 ply sleeve, 3" width	288 each	14"
4162	100% Kevlar®, 2 ply sleeve, 3" width	288 each	16"
4182	100% Kevlar®, 2 ply sleeve, 3" width	288 each	18"
4222	100% Kevlar®, 2 ply sleeve, 3" width	288 each	22"
4242	100% Kevlar®, 2 ply sleeve, 3" width	288 each	24"



# KutBuster®

## KutBuster® Kevlar® Gloves- Greater cut resistance!

Lakeland's KutBuster® protective gloves feature DuPont Kevlar® Plus fibers that provide 18% more cut resistance than standard Kevlar® brand fiber. These quality gloves retain the same heat and flame resistance offered by standard Kevlar®. They won't melt, drip or burn in air. KutBuster® gloves keep potentially dangerous sharp edges at bay, outside and away from your hands and fingers. KutBuster® gloves are worn in a variety of industrial operations, including metal fabrication, auto and glass manufacturing. KutBuster® gives maximum protection and peace of mind to employer and employee alike.

## KutBuster® Applications

Heating/AC Manufacturing  
 Metal Handling  
 Fabrication  
 Aerospace  
 Auto Industry  
 Steel Industry  
 Ceramics  
 Glass and Metals

## KutBuster® Features

- Cut Resistant
- Heat Resistant
- Abrasion Resistant
- Exceptional Wet Strength
- Comfortable and light-weight
- Reversible for longer wear
- Machine launderable

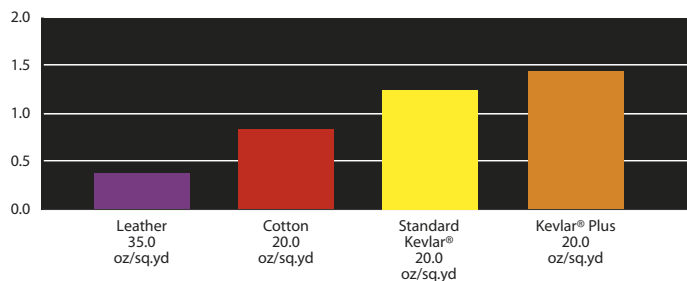
## KutBuster® Gloves

Style No.	Description	Size
25-643	7 gauge, 100% Kevlar® Plus, KutBuster® knit glove	S, M, L
25-642	7 gauge, 100% Kevlar® Plus, KutBuster® knit glove	S, M, L
25-646	7 gauge, 100% Kevlar® Plus, KutBuster® knit glove	S, M, L

## Sleeves

Style No.	Description	Size
25-7-410	7 gauge, 100% Kevlar® Plus, KutBuster® sleeve	10"
25-7-412	7 gauge, 100% Kevlar® Plus, KutBuster® sleeve	12"
25-7-414	7 gauge, 100% Kevlar® Plus, KutBuster® sleeve	14"
25-7-416	7 gauge, 100% Kevlar® Plus, KutBuster® sleeve	16"
25-7-418	7 gauge, 100% Kevlar® Plus, KutBuster® sleeve	18"

Cut Protection Performance Table



# DextraGard®

## Cut resistant Spectra® gloves that are the top choice in the food processing industries!

Lakeland's glove designers know that very sharp edges call for very tough gloves. That's why our DextraGard® line of protective gloves and sleeves uses Spectra® high performance fibers that provide superior cut and abrasion resistance to a large cross section of the food processing industry.

Lakeland's DextraGard® gloves are for applications that are routinely exposed to extremely sharp blades and edges. DextraGard® gloves fiber surface lets the sharp cutting edges roll over the surface of the glove preventing serious injury. Both industrial manufacturing and food processors prefer DextraGard® gloves for being rugged and highly resistant to cut, as well as being soft and comfortable. DextraGard® reduces hand fatigue that often accompanies repetitive gripping and flexing.

### DextraGard® Applications

Fishing Industry  
Razor Blade Manufacturing  
Food Processing  
Poultry Industry  
Meat Processing  
Boning  
Metal Handling  
Automotive  
Aerospace  
Plastic Extrusion  
Lumber and Paper  
Wire and Cable Industry  
HVAC Industry  
Glass

### DextraGard® Features

- FDA approved material
- Outstanding Cut Resistance
- Soft, Comfortable, Flexible-reduces hand fatigue
- Low Moisture absorption (<2%)
- Breathable
- Washable

## DextraGard® Gloves

### 7 Gauge Heavyweight DextraGard® Knit gloves

Style No.	Description
9100 S-XL	Heavyweight DextraGard® Spectra® Knit glove
9600 S-XL	"Pre-washed" Heavyweight DextraGard® Spectra® Knit glove
96-490 S-L	"Pre-washed" Extended Cuff Heavyweight DextraGard® Spectra® Knit glove

### 13 Gauge Lightweight DextraGard® Knit gloves

9200 S-XL	"Pre-washed" Lightweight DextraGard® Spectra® Knit glove
9500 XS-XL	Lightweight Stretchable DextraGard® Spectra® Knit glove





# Grapolator®

## Grapolator® Gloves. They don't come any tougher!

This Lakeland line of extraordinary Grapolator® gloves and sleeves offers hand and arm protection to the max. Stainless steel wire core is combined with high-strength man-made fibers to give workers an extremely effective protective glove. These gloves provide super protection from cuts, and for all their "muscle", lose no comfort or manual dexterity properties. Grapolator® gloves can be washed in hot water and hot-air dried. Use the Grapolator® around sheet metal, knives, sharp plastic edges and glass. Grapolator® gloves and sleeves are available in black, gray or blue.

## Grapolator® Applications

- Steel Industry
- Glass Handling
- Food Processing
- Fishing Industry
- Printing
- Textiles
- Mining
- Construction
- Sugar Cane Industry

## Grapolator® Gloves

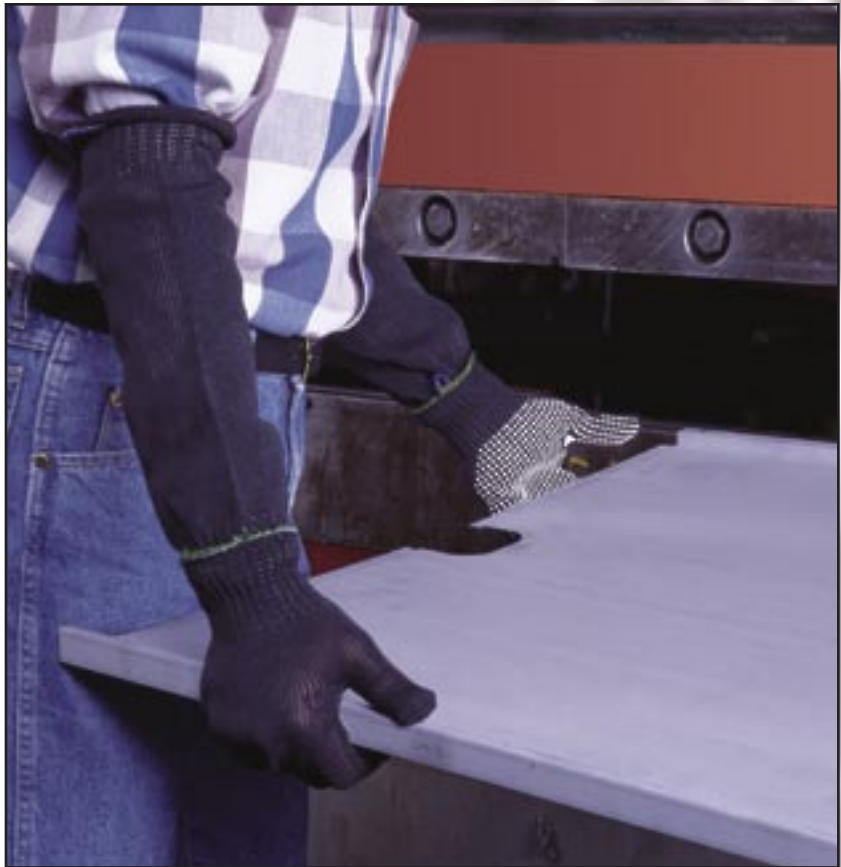
### GLOVES

Style No.	Description	Sizes
93-100	Grey, Grapolator®, steel reinforced, 10.75", cut resistant	S-XL
93-120	Black, Grapolator®, steel reinforced, 10.75", cut resistant	S-XL
93-125	Blue, Grapolator®, steel reinforced, 10.75", cut resistant	S-XL

### SLEEVES

93-4737	Black, Grapolator® sleeve, steel reinforced, 10" long, 4" wide
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**Other lengths available upon request!**



## Grapolator® Features

- High resistance to cuts
- Pre-Shrunk
- Comfortable and light-weight
- Exceptional wet strength
- Excellent resistance to ultraviolet radiation
- Reversible for longer wear

# Thermbar®

## Too Hard to Handle? Not with Thermbar®!

Lakeland's heat protective gloves made with proprietary Thermbar® yarns are the best solutions for problems associated with intermittent handling of hot objects. Thermbar® protective gloves are used throughout the glass and automotive industries, and extensively by laboratory workers in all situations where required heat protections ranges up to 400° - 600° F. Black in color, these gloves are available in a full line of sizes. They may be custom-knit for various levels of heat, and are produced with various high-performance materials, including combinations with Kevlar®.

## Thermbar® Applications

Glass Manufacturers  
Auto Industry  
Laboratories



## Thermbar® Features

- Black Color
- Will not melt or burn when exposed to flame
- Intermittent handling of hot objects up to 600° F
- Lightweight design
- Excellent dexterity and flexibility
- Mildew resistant, not affected by perspiration
- Ambidextrous, no pairing necessary

## Thermbar® Gloves

Style No.	Description
6100R	100% Thermbar®, Heat Resistant, 10" mens knit glove
6110	100% Thermbar®, Heat Resistant, 9" ladies knit glove
61-391	100% Thermbar®, Heat Resistant, 12" mens knit glove
61-474	100% Thermbar®, Heat Resistant, 14" mens knit glove
61-494	Mingled 100% Thermbar®/100% Kevlar®, 10" mens glove
61-466	Mingled 100% Thermbar®/100% Kevlar® 10.25" mens glove
61-420	Plated 100% Kevlar®/100% Thermbar®, 11" mens glove
61-1158	100% Thermbar® SPOT WELD glove
<b>Double Glove Combination</b>	
61-503	100% Kevlar® Outer, 100% Thermbar® Inner, 12" mens glove (also available with Thermbar® Outer, Kevlar® Inner)
<b>7 Gauge Sleeves</b>	
61-5457	Mingled, 100% Thermbar®/100% Kevlar®, 14" Sleeve
61-4877	100% Thermbar®, 18" Sleeve, 4.75" Wide
<b>Specialty Products</b>	
61-556	Pad-100% Thermbar®, 4 Ply, 5.75" X 10"



# Crocskins®

## Tougher than tough!

Tougher than tough; that's the only way to describe Crocskin® gloves from Lakeland. These gloves feature **greater cut resistance** than many aramid gloves at a very affordable price. Crocskins® handle sharp edges with ease. A unique blend of yarns give Crocskins® superior protection.



## Crocskin® Gloves

Style No.	Description
30-130 S - XL	Crocskin® Blended Kevlar gloves



### Crocskins® Features

- Blended Kevlar®
- Will not melt or burn when exposed to flame
- Greater cut protection than many other 100% aramid general purpose gloves
- Excellent abrasion resistance
- Exceptional high resistance to cuts
- Superior overall comfort

# DesPro™

## Design the Protection Exactly Where You Need it!

The DesPro™ work gloves build protection exactly where it is needed. The balance of the glove is knitted utilizing a more economical cut resistant yarn where the protection is not as demanding. By using a combination of materials, the result is a product that protects yet costs less.

DesPro™ work gloves can be made from any combination of yarns for any industry. From food services, to industrial, to warehouse, Lakeland can spec knit a glove that suits your needs.

Before you place your next order for a more costly glove, try a DesPro™ on for size. It just may be the fit you need for your company.

### MULTI YARN COMBINATIONS!

### Design the protection areas you need!

- Single or multiple fingers
- Palm area
- Thumb crotch
- Heel
- Wrist
- Front or back

Unlike other logo's, which are a silk screen design, Lakeland Industries Inc. can knit your company logo or name as an integral part of your glove!

# DesPro™ Plus

Knitted with the same yarn, DesPro™ Plus is designed to deliver a cost effective glove with the protection you need, exactly where you need it. The knit is "doubled-up" in high stress/wear areas to focus on the protective properties of the yarn, while lower wear areas stay protected, but at a lower cost. The result is a glove that keeps you safe, wears well, and doesn't break the bank.



## DesPro™ Plus Features

- Single yarn throughout the glove with any custom design
- Puts the protection where it is needed most
- Provides greater longevity in wear areas with the economy of a well balanced glove
- Reduces greater overall costs based on greater glove life
- Ambidextrous styles
- Industrial food and service applications



*Patented construction process "doubles up" the yarn in high stress/wear areas and puts the extra protection where you need it!*

# GleamClean™

## Low Particulate Count

**Eliminates contamination to surfaces which cause blemishes, craters, fisheyes and other imperfections.**

### GleamClean™ Low-Lint Glove Style 13-1550

- Electronics
- High-tech manufacturing applications
- Auto and aircraft industry
- Paint Spray - inspection, prepaint, final paint
- Custom designs available upon request



# Gleam Clean™

## GleamClean™ Features

- 100% Silicone Free
- Oil Free
- Low lint material
- 100% inspection
- Sorting, packaging and inspection conducted in clean room environment
- Tactile sensitivity
- Anti-static styles
- Color coded for sizing
- Standard and extended glove lengths



## GleamClean™ Dotted-block styles

- After primer painting, before finish paint
- Inspection for any remaining imperfections



# DinoHyde™

## Leather Protected Gloves

DinoHyde™ Gloves give you the extra measure of protection from puncture or contact with extremely sharp edges. DinoHyde™ combines the cut resistant features of Kevlar® or Spectra® (your choice) with a protective layer of leather. The gloves can be customized to fit your specific work application... leather can be placed on the palm, backside, or index fingers.

## DinoHyde™ Applications

- Paper mills
- Material Handling
- Glass
- Window, door frame
- Steel manufacturers
- Textile Manufacturing
- Fab Shops



# DINOHYDE™

## DinoHyde™ Features

- Adds an additional level of protection from puncture, cut and heat.
- Combines the protection of cut resistant products with the benefit of leather and other woven materials
- Available in white, black, or natural leather
- DinoHyde™ leather protection can be customized... Add the leather feature to the index fingers, the back side of the glove, the palm side, or all of the above!

# SPIDERGRIP™



**Job fitted for applications where dexterity, flexibility and comfort are desired!**

## SpiderGrip™ Applications

- Light to medium fabrication
- Parts handling
- General purpose handling where light oils or liquids are present
- Maintenance
- Warehousing
- Corrugated manufacturing

### SpiderGrip™ Style 7-1506, Latex

- Rubber coated
- Polyester cotton glove
- Seamless design
- Textured palm provides excellent grip
- Liquid repellent palm
- Puncture resistant
- Ergonomic fit conforms to hand
- Outstanding comfort
- Breathable back keeps hand cool
- Long wearing
- Combines performance and economical pricing



### SpiderGrip™ Style 22-1507, NBR

- Nitrile coated
- 100% Kevlar glove
- Seamless design
- Abrasion Resistant
- Puncture resistant
- Ergonomic fit conforms to hand
- Outstanding comfort
- Breathable back
- Long wearing
- Combines performance and economical pricing





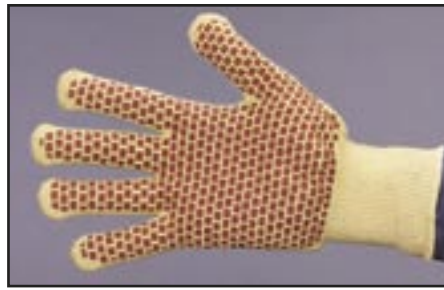
# Patterns

## Lakeland has a variety of patterns to best fit your needs!

Lakeland offers a broad selection of glove patterns and coatings for safe handling of certain sharp, hot or slippery materials, each to handle specific situations. Every Lakeland glove pattern is designed to provide the best grip possible for a specific handling job. Our dot, block, stripe, palm coat, dotted fingers/palm coat, and the Grip Plus®, are used widely and effectively in industries such as sheet metal, glass handling, food processing, meat packaging, and automotive manufacturing. The patterns that are shown represent our basic Lakeland styles. Other patterns are available upon request.

### Multiple Coatings to Choose From!

- PVC
- Specialty Compounds (Grip Plus®)
- Nitrile
- High temperature controls
- Coating Colors: brown, black, blue, green, red, rust, white and red. (Other colors available).



**BLOCKS**



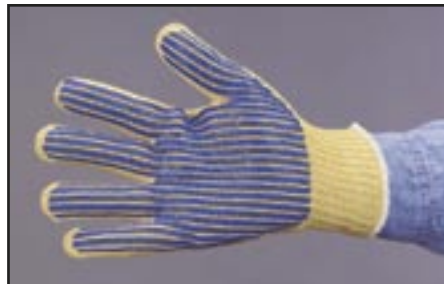
**Criss Cross**



**Dotted Fingers/Palm Coat**



**Dots**



**Stripes**



**Palm Coat**

**Custom  
Designs  
Available Upon  
Request!**

# Blends

## Blended Safety Gloves Are More Versatile!

Just as two heads are better than one, Lakeland's special blends of two or more yarns provide superior protection in the workplace. Our Mocktwist® single ply yarn combines two different synthetic materials spun together; rugged DuPont Kevlar® and a cotton or nylon fiber. These blends give a safety glove Kevlar's® tough cut resistance and the flexible comfort and economics of cotton. The result is rugged, affordable comfort. While none of the blended products provide 100% of the physical wear resistance of Kevlar®, there are many applications in which Lakeland's blends, both mingled and plated types, are quite suitable, even preferred.



## Blended Gloves

Style No.	Description
2100 KNB	Kevlar® Nylon Mens Glove
2110 KNB	Kevlar® Nylon Ladies Glove

## Mocktwist Gloves

Style No.	Description
26-381	Kevlar® Nylon Mens Glove
26-379	Kevlar® Nylon Ladies Glove

## Plated Gloves

Style No.	Description
26-328	Kevlar® Nylon Mens Glove
26-621	Kevlar® Nylon Ladies Glove

# Sleeves

## How to Protect What's Up Your Sleeves.

Lakeland knows the importance of people's arms, and offers its high-tech, proven line of protective sleeves to customers with confidence. Our wide-bodied DextraGard® sleeves provide superior cut resistance and flexible comfort to industrial and food industry applications, sheet metal, HVAC, pulp and paper mills and fish/meat processors. These sleeved offer less than 2% moisture absorption, so after laundering they maintain their neat, hygienic appearance longer than other sleeves. Their breathability, washability and economical cost-to wear ratio make them a popular choice.

Lakeland's line of black sleeves includes products ranging from 4" to 32" in length. They are available in various materials: eg. high strength man-made fibers combined with a stainless steel core (like Grapolator® gloves); Thermbar® for excellent heat resistance, lightness and dexterity; and black Kevlar® fabrics. All of our black sleeves are ideal in situations where messy applications create unsightly residues.

Where good abrasion and cut resistance, thermal properties and durability are required, Lakeland sleeves of Kevlar® are recommended. These sleeves come in standard 3" widths and wide-body 4 1/4" styles. The wide-bodies are more comfortable for workers that need a larger width sleeve or when the wearer has large arms. The sleeves are also available as combinations of outer Kevlar® with inner cotton, affording the best protection and comfort at an

## Kevlar® Sleeves

Style No.	Description
41222	12" 100% Kevlar®, 2 ply sleeves, 3" width
41422	14" 100% Kevlar®, 2 ply sleeves, 3" width
41622	16" 100% Kevlar®, 2 ply sleeves, 3" width
41822	18" 100% Kevlar®, 2 ply sleeves, 3" width

## Extra Wide Kevlar® Sleeves

Style No.	Description
41222X	12" extra wide, 100% Kevlar®, 2 ply sleeves, 4 1/4" width
41422X	14" extra wide, 100% Kevlar®, 2 ply sleeves, 4 1/4" width
14622X	16" extra wide, 100% Kevlar®, 2 ply sleeves, 4 1/4" width
41822X	18" extra wide, 100% Kevlar®, 2 ply sleeves, 4 1/4" width

## DextraGard® Sleeves

Style No.	Description
9412	12" DextraGard®, 5 1/4" width
9414	14" DextraGard®, 5 1/4" width
9416	16" DextraGard®, 5 1/4" width
9418	18" DextraGard®, 5 1/4" width

## Grapolator® Sleeves

Style No.	Description
94-4737	10" Grapolator® sleeve, steel reinforced 4" wide

Other sleeve widths and lengths are available.



# **Woven Protective Clothing**

**FR Cotton**

**Pyrolon<sup>®</sup> DTP**

**Nomex<sup>®</sup> IIIA Coveralls**

**StaticSorb<sup>®</sup> Static Dissipative Clothing**

**CleanScreen<sup>®</sup> Poly Taffeta Wear**

**Frontier<sup>®</sup> Poly Cotton Wear**

**Code One<sup>®</sup> EMT Emergency Wear**





# FR Cotton

## Economical FR Protection That's Made to Last!

The dangers of a flash fire and/or explosion are an everyday worry for industrial workers. If workers are equipped with a flame-resistant protective clothing injuries can be avoided.

Lakeland's flame resistant coveralls manufactured with FR cotton have the built in toughness that you expect from a leader in the flame resistant market. Whether you are clothing pipeline workers or linemen, these coveralls offer amazing protection and value.

From our reinforced stitching to our covered snaps, Lakeland's FR cotton coveralls have details that you won't find from any competitor. Since the material is FR cotton, it is less costly than other fabrics, providing an affordable solution.

No one can predict when an emergency will occur. Be prepared for anything with inexpensive and reliable protection. Lakeland coveralls made from FR cotton can ease your concerns about the safety of your employees without causing concerns about the cost.

**C081** - 9.0 oz. per square yard FR cotton. Available in Navy, Orange and Khaki.



### FR Cotton Coveralls

- Two patch breast pockets, left chest pocket has safety flap
- Heavy duty, two-way quick release brass zipper
- Heavy duty snaps, covered internally
- Two hip pockets with a snap closure on the left hip pocket
- Pleated bi-swing back with elasticized waistband
- Utility pocket on right leg
- Adjustable sleeve cuffs



NAVY



ORANGE



KHAKI

### FR Cotton Quick Pic

- Guaranteed to be flame resistant for the life of the garment
- Two swing pockets with internal pass-thrus
- Flared leg cuffs for ease of donning and doffing
- Sewn throughout with FR thread

# Pyrolon® DTP

## The Disposable Thermal Protective Garment From Lakeland Industries.

Pyrolon® DTP (Disposable Thermal Protection) provides improved thermal protection, greater comfort, and a low economical price to occasional users of FR cottons and aramids. These garments offer high air permeability and high combined TPP ratings, giving you greater comfort and better protection. Pyrolon® DTP has a low thermal shrinkage and a lower predicted body burn injury than incumbent materials. Pyrolon® DTP is lighter than most FR cotton fabrics which allows for a higher air flow through the fabric to carry away moisture. Pyrolon® DTP is more durable than other disposable FR garments, giving you longer use times to extend your budgets.

**CF10** - Action back, covered Nomex® Quick-Release zipper, pass-thrus, snap at collar and waist, 7 pockets (tool, 2 chest, 2 hip, 2 waist), elastic back waist.

**CF11** - Covered Nomex® Quick-Release zipper, elastic back waist, 2 sewn-on pockets (left breast, right hip).

**CF12** - Covered Nomex® Quick-Release zipper, set in sleeves.

### Pyrolon® DTP Physical Properties

Weight	6.0 oz/yd <sup>2</sup>	TPP, Contact	8.8
Grab Tensile	MD 38.7 lbs XD 35.2 lbs	Durability	24 hours H <sub>2</sub> O
Trap/Tear	MD 15.7 lbs XD 14.0 lbs	Air Permeability	269 CFM
TPP, Spaced	13.3	Resistivity (50% relative humidity)	3.8x10 <sup>10</sup> ohms



### Pyrolon® DTP Quick Pic

- Disposable thermal protection
- Comfort
- Economical
- Antimicrobial treated

# Nomex® IIIA

Everyday fuel handlers, pipeline workers, off shore oil rig crews, industrial workers and linemen are exposed to the hazards of flash fires or explosions. Many injuries can be avoided or minimized if workers are wearing flame resistant protective clothing.

Lakeland flame resistant coveralls have the built in toughness and the uncompromising features that you expect from a leader in the flame resistant market. Our durable coveralls are designed to provide maximum comfort, protection and features. From our reinforced stitching to our covered snaps, Lakeland's Nomex® IIIA Coveralls have details that you won't find in any other coverall.

No one can predict when an incident will occur, so be prepared with the best protection available. Lakeland coveralls made from Nomex® IIIA

**C011** - 4.5 ounce Nomex® IIIA coveralls. Available in Navy, Royal, Red, Orange, Yellow and Khaki.

**C021** - 6.0 ounce Nomex® IIIA coveralls. Available in Navy, Royal, Red, Orange, Yellow and Khaki.

## Nomex® IIIA Coveralls

- Two patch breast pockets, left chest pocket has safety flap
- Heavy duty snaps covered internally
- Two hip pockets with a snap closure on the left hip pocket
- Pleated bi-swing back with elasticized waistband
- Utility pocket on right leg
- Adjustable sleeve cuffs
- Flared leg cuffs for ease of donning and doffing
- Sewn throughout with Nomex® thread



NAVY



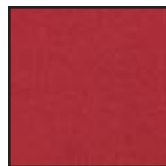
ROYAL



YELLOW



ORANGE



RED



KHAKI

## Nomex® IIIA Quick Pic

- Comfort and Protection
- Heavy duty, two way quick release brass zipper with Nomex® Zipper tape
- Exact chest sizes for precise fit
- Nomex® ripstop swing pocket with internal pass-thrus

# StaticSorb®

StaticSorb® Coveralls from Lakeland's Woven Products Division are quality garments designed to control electrostatic contamination. They are worn in food and paint rooms, throughout the electronics assembly and pharmaceutical industries, and in locations where the static electricity build-up may cause costly defects.

StaticSorb® Protective Wear has no raw edges, so chance of loose fiber contamination is zero. Features include double lap felled seams, zipper or snap closures, and comfortable breathability. Durable StaticSorb® Protective Wear stands up to two years of industrial laundering.

**\*Please specify fabric when ordering**

## StaticSorb® Physical Data

	Integrity 1750	C3	AMD Stripe
Weave	Plain	Plain	Plain
Yarn Type	High Density	High Density	Microdenier
Weight (oz./sqyd)	2.8	2.8	3.7

## StaticSorb® Test Data

	StaticSorb® C3	StaticSorb® AMD Stripe
Paint Bleed Through	<0.2	0.2
Paint Gain in Grams (30 sec)	<0.3	<0.3
Air Permeability (ASTM D-737) (Cubic Feet per Minute/Square Foot)	≥2.5	≥11
Particle Filtration Efficiency/IES RP-CC-003.2 (Percent Removal at 5 Microns)	≥90%	≥90%
Moisture Vapor Transmission Rate/ASTM E-96 (Grams/Meter <sup>2</sup> /24 Hours at 73°F, 50% RH)	>1500	>1500
Roughing and Pilling/ASTM 3512 Modified (Subjective Rating scale 0.5-5.0)	≥4.0	≥4.0
Static Decay Time (seconds-positive charge) (Federal Standard 101C/4046 Charge Decay Time in Seconds measures how fast a charge will dissipate from a fabric)	>0.01	>0.01
Static Decay Time (seconds-negative charge) (Federal Standard 101C/4046 Charge Decay Time in Seconds Measures how fast a charge will dissipate from a fabric)	>0.01	>0.01

**\*Now Available - I-1750**

### Chemstat®



#### Coverall, Style C210

Chemstat® coverall with knit vents at back yoke and crotch, swing pockets with pass-thrus, one chest pocket with flap, one hip pocket with flap, mandarin collar with snap adjustment, elastic back waist with snap adjust side tabs, snap adjustment on ankles, hook and loop adjustment on wrists, double needle lap felled seams, and zipper front.

**Sizes:** S - XXL

### Nylostat®



#### Labcoat, Style L600

Nylostat® labcoat with snap front, one chest pocket, two lower pockets, snap adjustment at wrists, side entry slits.

**Sizes::** S - XXL

### Integrity® 1750



#### Coverall, Style C200

StaticSorb® coverall with knit vents at back yoke, upper sides and inseams, swing pocket with pass-thrus, one inside chest pocket with flap, mandarin collar with snap adjustment, elastic back waist with snap adjust side tabs, snap adjustment on wrist and ankles, double needle lap felled seams, zipper front.

**Sizes:** S, M, L, XL, XXL



#### Coverall, Style C230

StaticSorb® coverall with elastic back, snap adjustment at wrist and ankles.

**Sizes:** S, M, L, XL, XXL

## StaticSorb® Quick Pic

- Electrostatic dissipative
- No raw edges
- Double lapped felled seams
- Long lasting
- Integrity Fabrics with Antimicrobial Protection





**Coverall, Style C221**

StaticSorb® coverall with 2 way coil zipper, snap adjustment at sleeves and leg hems.  
**Sizes:** S, M, L, XL, XXL



**Shirt and Pants, Style C240/250**

StaticSorb® pullover shirt with placket front, snap closures, inner chest pocket with flap, snap adjustments on wrists, knit vent on yoke and sides. Pants have swing pockets, 2 hip pockets with flaps, knit vent at inseams, snap adjustments on leg hems.  
**Sizes:** S, M, L, XL, XXL



**Frock, Style L610**

StaticSorb® frock with Delrin® zipper front, electrostatic dissipative knit cuffs.  
**Sizes:** S, M, L, XL, XXL



**Labcoat, Style L620**

StaticSorb® labcoat with button front, one chest pocket, two lower pockets, side entry slits.  
**Sizes:** S, M, L, XL, XXL



**Apron, Style M990**

StaticSorb® bib apron with two pockets, bound edges.  
**Sizes:** S, M, L, XL, XXL

Some garments are available in C3 and Integrity 1750. Contact your sales representative for details!



**Coverall, Style C200**

StaticSorb® coverall with knit vents at back yoke, upper sides and inseams, swing pocket with pass-thrus, one inside chest pocket with flap, mandarin collar with snap adjustment, elastic back waist with snap adjust side tabs, snap adjustment on wrist and ankles, double needle lap felled seams, zipper front.  
**Sizes:** S, M, L, XL, XXL



**Hood, Style M871**

StaticSorb® hood, snaps for face mask attachment, vertical and horizontal snap adjustment on back for proper fit, double lapped felled seams, gripper close on cape.  
**Sizes:** L, XL  
*Face mask not included*



**Bouffant Cap, Style M861**

StaticSorb® 23" bouffant cap.  
**Sizes:** One size



**Cap, Style M840**

StaticSorb® cap, plastic size adjust tab, soft visor, bound seams.  
**Sizes:** One size, adjustable



**Boots, Style M880**

StaticSorb® 18" boot, static dissipative molded vinyl sole, adjustable strap and across instep and around ankle, elastic top.

# CleanScreen® Poly Taffeta

## Let CleanScreen® make lint the least of your worries!

Lakeland's line of woven CleanScreen® non-linting garments are constructed in a plain weave with DuPont 100% Dacron® Polyester yarn. These labcoats, coveralls and shirt-pant combinations effectively bar airborne particulates like lint from clean rooms and peripheral areas meant to be pristine. They are the top priority choices for workers in industrial clean rooms, particularly in the electronic and pharmaceutical industries, as well as in automotive assembly and paint spray environments. Available with nylon zippers and adjustable snap closures in a full range of sizes and colors. Lakeland's line of versatile woven garments protect the work as well as the worker.



### Coverall, Style C100

CleanScreen® coverall, with mandarin collar, snap adjustments on collar, sleeves and legs, 2 way coil zipper, elastic back waist.  
**Sizes:** S, M, L, XL, XXL



### Coverall, Style C111

CleanScreen® coverall, 100% Polyester Herringbone weave, with 2 way coil zipper, snap adjustment on sleeves and legs, vent holes at underarm and crotch.  
**Sizes:** S, M, L, XL, XXL



### Coverall, Style C120

CleanScreen® coverall, with 1 chest pocket, 1 hip pocket, elastic wrists, 2 way zipper, vent holes at underarm and crotch.  
**Sizes:** S, M, L, XL, XXL



### Coverall, Style C140

CleanScreen® coverall, with 1 chest pocket, 1 hip pocket, elastic wrists, 2 way zipper, side entry slits, vent holes at underarms and crotch.  
**Sizes:** S, M, L, XL, XXL

## CleanScreen® Quick Pic

- Non-linting
- Variety of closure systems
- Variety of features
- Full range of sizes



**Coverall, Style C141**

CleanScreen® coverall, with 1 chest pocket, 1 hip pocket, 2 way zipper, side entry slits, zipper at inseam of each leg, elastic back waist.  
Sizes: S, M, L, XL, XXL



**Coverall, Style C142**

CleanScreen® coverall, short sleeves, 1 chest pocket, 1 hip pocket, 2 way zipper, side entry slits.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L500**

CleanScreen® labcoat, 3/4 length, 1 chest pocket, 2 lower pockets, snap front.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L510**

CleanScreen® labcoat, knee length, zipper front, side entry slits, elastic wrists.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L520**

CleanScreen® labcoat, knee length, zipper front, snap adjustments at wrists.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L530**

CleanScreen® labcoat, knee length, zipper front, 1 chest pocket, side entry slits, elastic wrists.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L540**

CleanScreen® labcoat, knee length, snap adjustments at wrists, snap front.  
Sizes: S, M, L, XL, XXL



**Shirt and Pants, Styles M910/M920**

CleanScreen® pull over shirt, long raglan sleeves, bound neckline, elastic wrist, elastic waist pants.  
Sizes: S, M, L, XL, XXL

# Frontier® Poly Cotton

## Make Frontier® perfect on the front lines!

Lakeland designs its line of Frontier® Poly Cotton lab coats and coveralls for laboratory and general industrial applications. These quality industrial garments bring four important factors into the equation: comfort, coolness, launderability, and economy. Our popular pre-shrunk woven cotton garments provide maximum flexibility, ease of movement and breathability for your people. Easy to wear means easy to work; a plus for production and your bottom line. All that and no-sag, durable looks too. Our Frontier® Poly Cotton protective wear is available in a full range of sizes and in White and Navy.

### Ladies Labcoat, Style L700

Ladies Frontier® labcoat, button front, belted back with button adjustment, 1 chest pocket, 2 lower pockets.

Sizes: S, M, L, XL, XXL



### CleanScreen® Quick Pic

- Comfort
- Coolness
- Launderability
- Economy



**Coverall, Style C314**

Frontier® Coverall with hook and loop front closure, felled seams, 100% cotton knit cuffs on sleeves and legs, belted back waist.  
Sizes: S, M, L, XL, XXL



**Coverall, Style C316**

Frontier® coverall with 2 way brass zipper, 7 pockets, side entry slits, bi-swing back, elastic bask waist.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L710**

Frontier® labcoat, snap front, side entry slits, 1 chest pocket, 2 lower pockets, knee length.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L720**

Frontier® labcoat, button front, side entry slits, 1 chest pocket, 2 lower pockets, knee length.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L730**

Frontier® labcoat, button front, 1 chest pocket, 2 lower pockets, knee length.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L740**

Frontier® labcoat, button front, side entry slits, 1 chest pocket, 2 lower pockets, 31" length.  
Sizes: S, M, L, XL, XXL



**Doctor's Smock, Style L750**

Frontier® Doctor's Smock, short sleeves, zipper front, pleated back with belt, 1 chest pocket, 2 lower pockets.  
Sizes: S, M, L, XL, XXL



**Labcoat, Style L760**

Frontier® labcoat, button front, 1 chest pocket, 2 lower pockets, 38" length.  
Sizes: S, M, L, XL, XXL

# Code One<sup>®</sup> EMT Wear

## The call has arrived...

Time is precious when you're on a call. There's no time for fumbling. No time to waste. With Code One<sup>®</sup> Protective Wear from Lakeland, you're ready to go. The tough nylon urethane coated jacket and pants are top quality reliable protection. Protection that shields you from liquid splashes and spills. If flame resistance is needed, there are Nomex<sup>®</sup> versions available. All Code One<sup>®</sup> EMT Wear gives you built in durability and personal comfort, with plenty of features engineered to save seconds. And lives.

Code One<sup>®</sup> EMT Wear is the smartest part of readiness. You can count on every jacket, pant or ensemble for day-to-day dependability. Every garment is guaranteed against defects in material or workmanship. Around the world, pros know we stand behind everything we make. That stance made our reputation for quality and integrity.

When the siren goes, when the whistle blows, you're ready with Lakeland's Code One<sup>®</sup> EMT Protective Wear. Thought out to save time.



## Code One<sup>®</sup> Jacket and Pants are available in These Colors



ROYAL BLUE



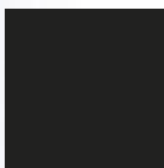
NAVY BLUE



WHITE



YELLOW



BLACK



ORANGE



FOREST GREEN



RED

Code One<sup>®</sup> Protective Wear is available in the following colors: Royal Blue, Navy Blue, Forest Green, White, Yellow, Orange, Red and Black. Lakeland can custom sew your town or department patches and insignias onto the garments. Call your Lakeland Sales Representative for details on custom orders.

### Code One<sup>®</sup> Quick Pic

- Top Quality
- Reliable Protection
- Durability
- Available in both Nomex<sup>®</sup> and Non-FR

**Removable Jacket Liner.**

Polyester liner with quilted polyester fiberfill. Lightweight but warm and comfortable, with a nylon zipper for easy attachment or removal.

**Optional Zip-off Hood.**

Lined for comfort and warmth.

**Stand-up Collar.**

Contoured around neck and lined with corduroy for comfort.

**Jacket and Bib Pants Outershell.**

Tough duty nylon (430 denier) coated with a urethane barrier to protect against wind, rain, cold and spills. Flame resistant DuPont Nomex® versions are available.

**5 Jacket Pockets.**

Two oversized 7" x 9" cargo pockets with unique "stay closed" cover; keeps items in pockets at all times. Two hand warmer pockets located in outer shell, and one 6" x 8" pocket on the inside liner for added convenience.

**Heavy Duty Molded Delrin® Zippers.**

Zipper runs full length of the jacket front, secures and handles easily. Large pull tabs for quick and easy grip.



**Knit Nylon Cuffs.**

Snug fitting quality knit nylon cuffs. Keeps warm air in, lets moisture out.

**Jacket "Snug-up" Adjustment Tabs.**

Tabs on coat bottom to keep wind out and warmth in.

**Covered Zipper, Front Fly Closure.**

**Heavy Duty Pant Suspenders.**

1.5" wide elastic, with adjustable non-slip clasps. Suspenders are secured to bib pants for lasting hold.

**Stitching.**

Sewn with heavy duty polyester thread to resist chemical and ultra-violet degradation.

**Pants Pencil Pocket.**

Room for three pens or pencils. No more searching for something to write with.

**Expandable Cargo Pocket.**

Plenty of room for essentials, "stay closed" cover keeps items in, even while bending over.

**Flashlight Pocket.**

Expandable pocket on back of legs keeps a mini-light handy at all times.

**White Reflexite® Stripes.**

White Reflexite® stripes on jacket chest, arms and pant legs give high visibility at night.

**Scissors Pocket.**

Pocket has a strip that keeps the scissors in place while you are on the go.

**Leg Zippers.**

Delrin® zippers in the leg make for easy on and off over heavy shoes or boots.



# Pyrepel

## Firefighters Turnout Gear

**Many describe it as a calling,**

something they were born to do. Being a firefighter is probably the most selfless job, yet most on the job couldn't see their lives any other way.

At Lakeland Industries, we want to make sure you are able to answer your calling for as long as you desire. That's why our garments are crafted to the most stringent standards. They allow you to move freely in an environment where seconds often mean the difference. When you answer your next call, you can feel confident in a Lakeland garment. We've made it our mission to protect America's bravest so you can protect our families from harm.







# Attack® Series

## On the attack in Fyrepel's Attack® Series.

When a call comes in, seconds count. Our Attack® Series lets you get ready with ease. The waist-high reinforced pants with a deep cut crotch are designed for easy entry. Since the garment is NFPA compliant, you can be sure that you are protected from harm.



### Attack® Series Quick Pic

- Available in a variety of fabrics and liners
- Removable liner system
- All major stress areas reinforced
- Deep cut fly and crotch for ease of entry

Third party certified to the current edition of NFPA 1971 and CAN/CGSB 155.1. Meets the requirements for 29CFR 1910.156



# ATTACK® FEATURES



# Battalion® Series

## You're ready for anything with Battalion®

Let's face it, you never know what to expect on the job. Our Battalion® Series of garments help you meet the demands of fire fighting head-on. When you put on this line of garments, you can move freely to get the job done.

The Battalion® Series features a high-back pant for greater protection. The front of the garment is waist high and when worn with the streamlined coat, it's a powerful combination that offers greater comfort and superior coverage.



## Battalion® Series Quick Pic

- Versatile
- Removable liner system
- Comfortable
- Affordable

Third party certified to the current edition of NFPA 1971 and CAN/CGSB 155.1. Meets the requirements for 29CFR 1910.156



# BATTALION® FEATURES



# Sterling Heights® Series

## On the move with Sterling Heights®

Whether you're entering a burning home or a raging high-rise, you can't have your gear impeding your progress. That's why fire departments nation-wide turn to our Sterling Heights® Series of garments.

Specifically designed for greater freedom of movement, our gear allows you to do your job the fastest and safest way possible.



## Sterling Heights® Series Quick Pic

- Comfortable
- Versatile
- Variety of fabric combinations
- Removable liner system

Third party certified to the current edition of NFPA 1971 and CAN/CGSB 155.1. Meets the requirements for 29CFR 1910.156



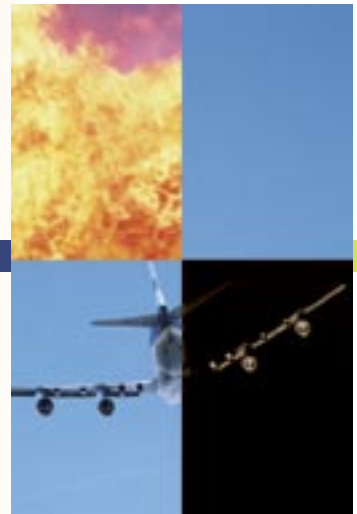
# STERLING HEIGHTS® FEATURES



# Combat® Series

CRASH • FIRE • RESCUE

CRASH • FIRE • RESCUE



## Deal with an emergency status in our Combat® Series Crash/Fire/Rescue Gear.

For those on high-temperature, high-risk response teams, you know that every fire is a battle that must be won. To provide the ultimate protection for your battalion, turn to our Combat® Series of aluminized turnout gear.

The Combat® Series combines the quality features of our Attack® Series with a highly reflective aluminized layer. Waist high reinforced pants designed for easy entry, and a 35" length coat keeps you protected at all times. Trusted by teams in the marine, airport, railroad, military and petrochemical operations, these suits provide superior protection.

## Combat® Series Quick Pic

- Hook and dee front closure system
- Sewn throughout with Kevlar® thread
- Leather reinforced cuffs
- Kevlar® wristlets

Third party certified to the current edition of NFPA 1976





# COMBAT® FEATURES

CRASH • FIRE • RESCUE

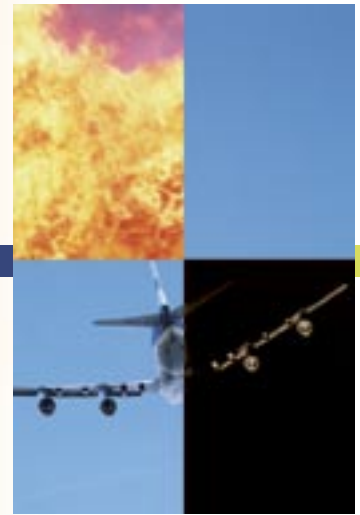


**Optional Tank Accomodation - Option #27**

# Combat Lite® Series

CRASH • FIRE • RESCUE

CRASH • FIRE • RESCUE



## Mayday! Mayday! Time for Combat Lite® Series Crash/Fire/Rescue Gear.

The Combat Lite® Series couples the Sterling Heights® Series design with an aluminized layer for additional protection. Enhanced freedom of movement is the result of bib-style pants and 29" coat. Perfect for those tight situations that call for specialized clothing.

Why are the Combat® and Combat Lite® Crash/Fire/Rescue suits the preferred suits for firefighters in high heat applications? They meet or exceed the requirements for crash, fire and rescue from the Federal Aviation Administration, the International Civil Aviation Organization and the United States Military. In addition, they meet or exceed the requirements for marine and offshore use.

## Combat Lite® Series Quick Pic

- Zipper front closure
- Short coat
- Bib pants
- Sewn throughout with Kevlar® thread

Third party certified to the current edition of NFPA 1976



# COMBAT LITE® FEATURES

CRASH • FIRE • RESCUE



# Wildland Fire Fighting Gear

The 2002 wildland fire season was the second largest in 50 years, with over 6.9 million acres burned around the United States. This year, federal researchers warn that several areas will experience above normal fire activity due to long-term drought conditions and limited snowpack. Whether you're involved in a training exercise to prepare for a busy season or actively engaged in a raging battle, you'll be protected and able to perform better in Fyrepel's Wildland Gear.

At Fyrepel, we take pride in what we do. We know that our garments are often the only thing protecting heroic firefighters when they're battling Mother Nature. So we design our gear with your needs in mind. We produce roomier garments so you can move freely when fighting the unpredictable wildland fire. And we offer enhanced protection to increase your coverage and minimize exposure.

We can't predict what this fire season will bring. But, we can help you prepare for it with a garment that lets you perform your job without worrying about your protection.



## Wildland Fire Fighting Gear Quick Pic

- Complete coverage
- Available in two fabrics
- Generous full cut garments
- Enhanced protection

Meets NFPA 1977 current edition



# WILDLAND FIRE FIGHTING GEAR FEATURES



## WILDLAND GEAR SIZING

	Small	Medium	Large	X-Large	XX-Large
Coat*	34"-36"	38"-40"	42"-44"	46"-48"	50"-52"
Pants*	28"-30"	32"-34"	36"-38"	40"-42"	44"-46"

Pant inseams are offered in 30", 32", and 34".  
 \* Actual chest and waist measurements

## Style Numbers:

- BC10N** 6.0 oz. Nomex® IIIA - Brushcoat
- BP10N** 6.0 oz. Nomex® IIIA - Brushpant  
93% Nomex®, 5% Kevlar®, 2% P140 Carbon Fiber
- BC10I** 9.0 oz. Indura Ultra Soft - Brushcoat
- BP10I** 9.0 oz. Indura Ultra Soft - Brushpant  
88% Cotton, 12% High Tenacity Nylon

# ACCESSORIES



**268RY**  
Bullard® PX NFPA firefighter helmet.



**268AX**  
Bullard® AX NFPA Aluminized PBI/Kevlar® cover with shroud.



**119PBI**  
6 oz. NFPA PBI/Lenzing FR™ blend knit hood



**119NM**  
6oz. Nomex® blend knit hood



**344-11G**  
NFPA Leather Glove with knit wristlets and vapor barrier lining



**344-08**  
13" aluminized Nomex® gauntlet gloves with leather palm and Nomex® lining.



**344-09**  
13" aluminized PBI/Kevlar® gauntlet gloves with leather palm and Nomex® lining.



**343-24**  
Aluminized PBI/Kevlar® Gloves



**343-28**  
Aluminized NFPA Gloves



**155N**  
NFPA Servus® insulated black rubber knee high boots; also available in non-insulated



**157**  
ARFF/NFPA Servus® aluminized rubber Crash/ Fire/Rescue boot



**PKG-13**  
Red nylon Cordura® bag with separate outer pocket for gloves. Measures 13"H x 13"W x 26"L



**PKG-15**  
Red nylon Cordura® bag with shoulder strap and handle. Measures 18"H x 18"W x 30"L.



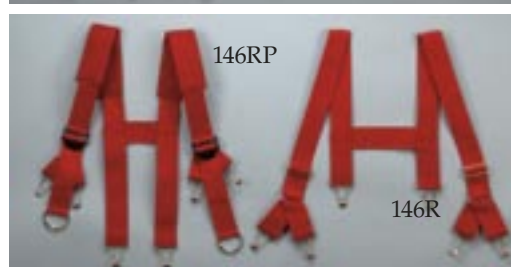
**126RP** – Heavy duty padded 2" H-back red elastic (6 point) suspenders with quick adjust pull ring.

**126R** – Heavy duty 2" H-back red elastic (6 point) suspenders.



**136RP** – Heavy duty padded 2" X-back red elastic (8 point) suspenders with pull ring.

**136R** – Heavy duty 2" X-back red elastic (8 point) suspenders.



**146RP** – Heavy duty padded 2" H-back red elastic (6 point) suspenders with pull ring.

**146R** – Heavy duty 2" H-back red elastic (6 point) suspenders.

# OPTIONS

For a complete listing of all Options and Accessories, please consult your Fyrepel Sales/ Customer Service Representative at 1-800-933-0115.



**CO-12 Bellow Pocket**  
**PO-3 Bellow Pocket**



**CO-12D Divided Pocket**  
**PO-D Divided Pocket**



**CO-8 Radio Pocket**



**CO-9 Flashlight Pocket**



**CO-10 Flashlight Loop**



**CO-24 Radio Mic Clip**



**CO-25 Pass Device Clip**



**CO-31 D ring attached vertically**



**CO-30 Hook attached vertically**



**PO-66 Leg Zippers**



**CO-20**  
Kevlar® extended wristlet with thumbhole



**CO-19 Name plaque**  
**CO-26 Letters**  
(voids NFPA on Combat and Combat Lite)

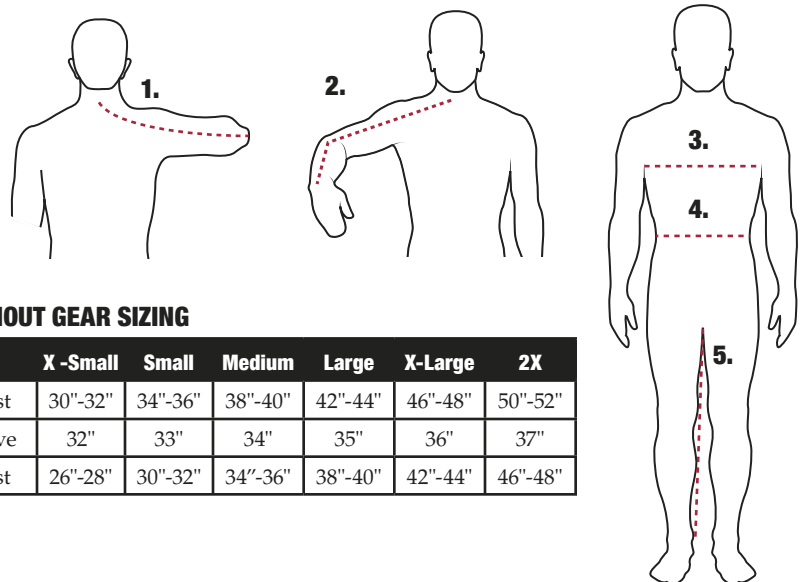
## MEASURING INSTRUCTIONS

**Sleeve:** Measure sleeve by holding arm out and forward as shown. **1.** Begin tape measure at nape of neck and... **2.** follow the contour of arm around elbow to 1" (2.54 cm) below wrist bone.  
Number of inches = sleeve size.

**3. Chest:** Measure around the fullest part of chest, keeping tape up under arms and around shoulder blades.

**4. Waist:** Measure around waist, over shirt and slacks at the height you normally wear your slacks. Keep one finger between tape and body. Number of inches = your size.

**5. Inseam:** For inseams other than the standard 29" length, measure from the crotch seam to the ankle bones. Number of inches (to the nearest 1") = inseam length.



## TURNOUT GEAR SIZING

	X-Small	Small	Medium	Large	X-Large	2X
Chest	30"-32"	34"-36"	38"-40"	42"-44"	46"-48"	50"-52"
Sleeve	32"	33"	34"	35"	36"	37"
Waist	26"-28"	30"-32"	34"-36"	38"-40"	42"-44"	46"-48"

## OUTER SHELL MATERIALS

- Nomex®** 93% Nomex®, 5% Kevlar®, 2% P-140 carbon fiber; plain weave. 7.5 oz. per square yard. Shelltite finish for water resistance.  
**Available colors:** Black, Yellow, Tan, Red, Natural.  
**Features:**
- Durable fabric
  - Cost effective
  - Proven track record
- Advance™** 40% Nomex®, 60% Kevlar®; Rip-stop weave. 7.0 oz. per square yard. Super Shelltite finish for added water and abrasion resistance.  
**Available colors:** Black, Yellow, Khaki, Gold.  
**Features:**
- Excellent protection
  - Resists abrasion
  - Affordable cost
- Basofil/Kevlar®** 40% Basofil®, 60% Kevlar®; Rip-stop weave. 7.5 oz. per square yard. Super Shelltite finish for added water and abrasion resistance.  
**Available colors:** Black, Gold.  
**Features:**
- Flexible
  - Remains supple after exposure to high heat
  - Offers superior thermal protection
- PBI®/Kevlar®** 40% PBI®, 60% Kevlar®; Rip-stop weave. 7.5 oz. per square yard. Super Shelltite finish for added water and abrasion resistance.  
**Available colors:** Black, Natural.  
**Features:**
- High thermal protection
  - Retains strength and durability after thermal exposure
  - Remains supple after thermal exposure
- Millenia™** 40% Zylon®, 60% Technora®; Twill weave. 7.5 oz. per square yard. Super Shelltite finish for added water and abrasion resistance.  
**Available colors:** Natural (Gold).  
**Features:**
- High thermal stability
  - Superior abrasion resistance
  - Superior strength retention after thermal exposure
  - Tear and cut resistance guarantee from the fabric mill

## THERMAL LINERS

- Q-9™** 9.3 oz. per square yard. Reprocessed Aramid batt quilted to a Meta-Aramid plain weave facecloth.
- Aralite®** 7.0 oz. per square yard. Meta-Aramid/Para-Aramid batt quilted to a Meta-Aramid plain weave facecloth.
- Caldura®** 7.8 oz. per square yard. Meta-Aramid/Para-Aramid batt quilted to a Nomex® filament/spun blended aramid facecloth.
- Caldura® SL** 7.1 oz. per square yard. Two layer E-89 quilted to a spunlace/filament Nomex® facecloth.
- Omni Synergy®** 7.1 oz. per square yard. Two layer spunlace 50% Basofil®/50% Aramid quilted to a calendered Nomex® ripstop facecloth.

## MOISTURE BARRIERS

- Aqua-Tech®** 2.7 oz. per square yard DuPont Nomex® E-89™ spunlaced fabric incorporating bi-component technology and chemical crosslinking.
- Stedair® 2000** 2.7 oz. per square yard spun Nomex® laminated to a 2. oz. per square yard breathable, monolithic polyurethane film with hydrophobic properties
- Stedair® 3000** 2.7 oz. per square yard spun Nomex® laminated to an ePTFE membrane. A combination of microporous and monolithic barriers.





# Limited Use Clothing, Chemical Protective Clothing, Woven Protective Clothing and Fyrepel Terms and Conditions

## Prices and Acceptance

All prices are subject to change without notice. All orders accepted subject to prices in effect at time of shipment. All orders accepted subject to fires, strikes, and any cause beyond our control.

## Delivery

We will make every effort to meet your delivery schedule but we shall not be responsible for any delay beyond our control. Transportation company's receipt of merchandise constitutes delivery and we shall not be responsible for damages, delay or loss. We will, however, assist at any time to collect claims against transportation company.

## Return Goods Policy

All requests for returns must be made within 90 days from invoice date. No returns will be accepted without a written authorization. Return product will be subject to a 20% restocking charge. All returns must be shipped freight pre-paid. We regret that special, made-to-order items are not returnable.

## Freight Policy (except Woven Protective Clothing and Fyrepel)

F.O.B. destination on shipments of \$2500.00 or more to one destination. Applies to a single order shipped to a single destination within the continental U.S. On freight paid orders, we will only ship via standard methods (i.e. UPS Ground, or standard truck). Any other shipping method requested will be billed to the customer at their expense.

## Freight Policy (Woven Protective Clothing and Fyrepel)

All prices are FOB St. Joseph, MO or Decatur, AL.

## Warranty

The following is made in lieu of all warranties expressed or implied including without limitation implied warranties of merchantability or fitness for a particular purpose: seller's only obligation shall be to replace such products proved to be defective because of workmanship. This warranty does not extend to raw materials and components supplied to Lakeland or any of its subsidiaries or division. Seller shall not be liable for any injury, loss or damage, direct or consequential, arising out of the use of or inability to use the product. Before using, user shall determine the suitability of the product for his intended use and user assumes all risk and liability whatsoever in connection therewith. Safety and permeation data for Lakeland protective clothing is available upon request. As in almost all instances, we do not know and cannot contact end users of our products, it is therefore, incumbent upon safety distributors to distribute to the end users both Lakeland's and the fabric manufacturer's safety and permeation data and other safety and use information as updated. Such data does not attempt to address all of the safety issues associated with protective garments. Improper use of these garments may result in personal injury or death. Improper use includes, but is not limited to improper selection of a garment for the foreseeable application, use without adequate training, disregard of any warnings and instructions supplied by us or the fabric manufacturer and failure to maintain and inspect the garments. Lakeland and its divisions' protective garments are intended to be used only in conjunction with an organized safety protection program, the requirements of all regulations promulgated by the Environmental Protection Agency (EPA), and the requirements of OSHA Safety and Health Standard 29 CFR 1910 and other OSHA regulations such as section 1910 et seq., available from the US Department of Labor, Occupational Safety and Health Administration; or other pertinent national recognized standards, such as those promulgated by the National Fire Protection Association (NFPA), the American Society for Testing and Materials (ASTM), and the US Coast Guard or the Department of Defense. The foregoing may not be changed except by an agreement signed by an officer of the seller. In all events, we make no warranty of any kind whatsoever, express or implied, and all implied warranties of merchantability and fitness for a particular purpose are hereby disclaimed by us and excluded from any contract.

## Payment Remedies, Service Charges, Choice of Law

Payment terms will be net thirty (30) days after shipment of the final assembled products. Except as may be otherwise agreed by the purchaser and the seller in writing, purchaser agrees to pay seller the purchase price for the products set forth herein, which prices are F.O.B. seller's initial shipping point. Purchaser shall bear all applicable U.S., federal, state, municipal and other governmental taxes, duties and charges (such as sales, use customs duty and similar charges) and all personal property taxes assessable on the products sold to purchaser. If purchaser is in default with regard to the above payment terms, seller, with or without notice to the purchaser, shall have the right to exercise any one or more of the following remedies, concurrently or separately, and without any election of remedies being deemed to have been made. (A) If purchaser shall fail to make any payments required by the payment terms described above within 15 days of the date thereof, purchaser shall pay to seller a service charge of .0465% a day for each day late that payment is overdue; (B) seller may enter upon purchaser's premises and without any court order or other process of law may repossess or remove the products, with or without notice to purchaser. Purchaser hereby waives any trespass or right of action for any damages by reason of such entry or removal; (C) seller may require purchaser, as its expense, to return the products in good repair, by delivering it packed and ready for shipment to such place or carrier as seller may specify; (D) seller may sue for and recover from purchaser the sum of all invoices unpaid, including service charges. A sale shall not be effective until shipment and an invoice has been sent by seller. The sale shall be considered to have been made in the same state of the seller's or its divisions principal place of business and shall be interpreted in accordance with the laws and regulations of the state of seller's or seller's divisions principal place of business. Purchaser agrees to the exclusive jurisdiction and venue in the state of seller's or its divisions principal place of business. In the event of any legal action with regard to the sale of any of Lakeland's products to purchaser, purchaser agrees that venue may be laid in the country of seller's divisions principal place of business; (E) to pursue any other remedy available at law, by statute or in equity; (F) no right or remedy herein conferred upon or reserved to seller is exclusive of any other right or remedy given herein or now or hereinafter existing by law or equity or by statute or otherwise, and may be enforced concurrently therewith or from time to time. No single or partial exercise by seller of any right or remedy hereunder shall preclude any other or further exercise of any right or remedy; (G) in the event of any legal action with respect to the sale of products by seller or purchaser, if seller is the

prevailing party in any such action, it shall be entitled to reasonable attorney fees, including attorney fees incurred at the trial level, including action at bankruptcy court, in appeal or review or incurred with action, suits, or proceedings, together with all costs and expenses incurred in pursuit thereof.

### **Warning**

This catalog contains general descriptions of certain Lakeland products. While some uses and performance capabilities are described, under no circumstances should the products be used except by qualified, trained personnel, and not until any instructions, labels or other literature (such as permeation or heat tolerance guides) provided by the fabric manufacturer or this seller have been carefully read and understood and the precautions therein followed. Only they contain the complete and detailed information concerning the products.

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Tyvek, Tyvek laminates, Polypropylene, Rytex, the Tychem Series are not intended for use as fire-retardant garments. These garments should not be used around heat, flame, sparks nor in potentially flammable or explosive environments. Permeation data, melting points and ignition temperatures for Tyvek, and Tyvek laminated are available from DuPont, the fabric manufacturer.

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For special or custom orders, please call customer service toll free at 800-886-8010 ext. 262, Janet.

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