

# CLIMASHIELD®

INSULATION INNOVATION

A DIVISION OF



## WHAT WE DO

Climashield® is a total insulation supplier manufacturing a broad portfolio of insulation products for the outdoor recreation, military and hospitality industries. Unlike other insulation suppliers, Climashield® manufacturers and engineers all of our products in-house, giving us the ability to customize insulation to a customer's exact specifications.

Using our signature continuous filament insulation, Climashield® engineers insulation for every adventure. Climashield® works behind the brands to deliver lightweight insulation and durable warmth for products including sleeping bags, outerwear, gloves, footwear, comforters and quilts.



## **OUR CUSTOMERS**

Climashield® provides lightweight thermal insulation to the world's most sought-after brands in the outdoor recreation, military and hospitality industries.

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**ARC'TERYX**

**AS TUCAS**

**BEYOND CLOTHING**

**CLAWGEAR**

**COLMAR**

**CUMULUS**

**CRYE PRECISION**

**DIRECT ALPINE**

**DROP ZONE**

**EDDIE BAUER**

**KANUK**

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**HELIKON-TEX**

**MASSIF**

**MOUNTAIN EQUIPMENT**

**NO GRAVITY**

**PACIFIC COAST FEATHER**

**PRIMA**

**PROPPER**

**SIVERA**

**TILAK**

**U.S. ARMED FORCES**

**WIGGYS**

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# THE CONTINUOUS FILAMENT ADVANTAGE™

As the only major manufacturer of lightweight continuous filament insulation in the world, Climashield® produces a broad range of continuous filament insulation products that are more lofty, durable, thermally efficient and resilient than competitive thermal insulation.

Continuous filament uses thousands of continuous strands of polyester in a natural interlocking solution.

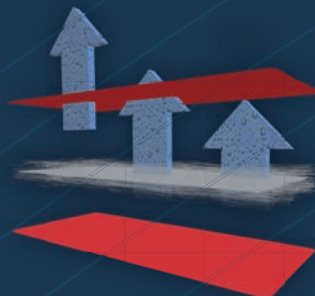
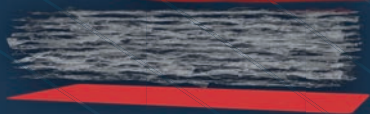
## RESILIENCY

Highly compressible, yet maintains its original shape after use or prolonged storage.



## DURABILITY

Does not pull apart when stretched.  
Doesn't clump, shift or separate with repeated use or washings.



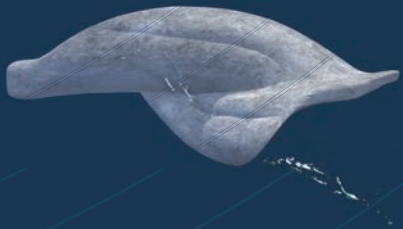
## WARMTH WHEN WET

Maintains warmth, even when wet,  
without impeding moisture permeability.  
Prevents a "clammy" feel during use.



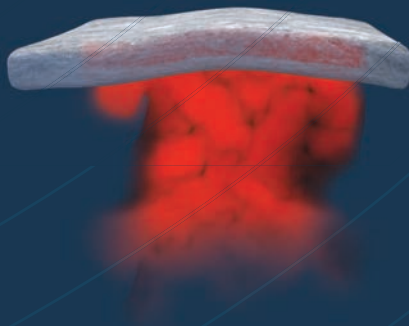
# AQUABAN® TECHNOLOGY

AquaBan® technology keeps you warm, even in wet conditions.



◀ Repels and sheds water, expediting the drying process.

Body heat remains trapped inside, maintaining warmth. ▶

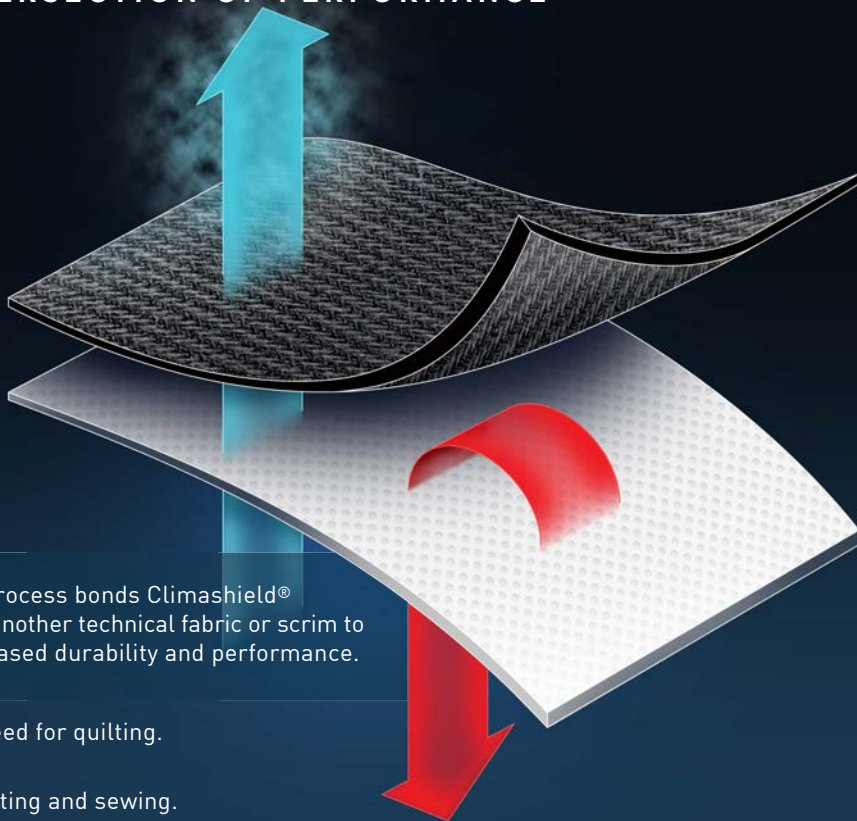


◀ Body moisture exits insulation for ultimate breathability, preventing a clammy feel.



# LAMISHIELD™

THE INTERSECTION OF PERFORMANCE



- ▶ Lamination process bonds Climashield® insulation to another technical fabric or scrim to achieve increased durability and performance.
- ▶ Eliminates need for quilting.
- ▶ Expedites cutting and sewing.



# CLIMASHIELD® FR-SH

Climashield® FR-SH is a Berry Compliant, flame resistant insulation designed to meet the specific requirements of both military and non-military transitory shelter applications. Utilization of Climashield® FR-SH minimizes HVAC energy consumption, reduces shipping weight and provides protection from momentary exposure to flames.

## PHYSICAL PROPERTIES

PRODUCT DESIGNATION		FR-150	FR-185	FR-225	FR-270
Basis Weight (+/-10%)	gm/m2	153	186	227	271
	Oz/Yd2	4.5	5.5	6.7	8
Thickness	CM	1.0	1.3	1.4	1.5
	In	0.4	0.5	0.55	0.6
Thermal Resistance	Clo	1.9	2.3	2.4	2.6
	R-Value	1.7	2.0	2.1	2.2

## FLAMMABILITY PROPERTIES

PRODUCT DESIGNATION		FR-150	FR-185	FR-225	FR-270
Vertical Burn ASTM 6413	Char Length (In)	<6.0	<5.0	<4.5	<4.0
	Afterflame (sec)	<2.0	<2.0	<2.0	<2.0
	Drip	No	No	No	No

Construction Note: Does not require quilting.

# APEX

## LIGHTWEIGHT WARMTH

Climashield® APEX reaches new heights in combinations of weight and thermal efficiency. Developed from a culmination of over 30 years of manufacturing experience, this innovative insulation is the lightest weight and most thermally efficient continuous filament insulation on the market today.



GREAT FOR:  
**OUTERWEAR &  
SLEEPING BAGS**



### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
2.0	68
3.0	102
4.0	136
5.0	170
6.0	203

### THICKNESS

IN	CM
0.50	1.3
0.75	1.9
1.00	2.5
1.25	3.2
1.50	3.8

### WARMTH TO WEIGHT

CLO/(OZ/YD <sup>2</sup> )
0.82
CLO/(G/M <sup>2</sup> )
0.024



# COMBAT

## LOW PACKING VOLUME

Climashield® Combat delivers insulation for the extreme requirements of tactical and military applications. Proudly made in the U.S.A., this specialized insulation is Berry Compliant and features low packing volume, durability and AquaBan® technology for staying warm in wet conditions.



**GREAT FOR:  
OUTERWEAR &  
SLEEPING BAGS**

### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
2.0	68
2.7	92
3.0	102
3.5	119
4.0	136
5.5	186

### THICKNESS

IN	CM
0.5	1.3
0.6	1.5
0.7	1.8
0.8	2.0
1.0	2.5
1.3	3.3

### WARMTH TO WEIGHT

CLO/(OZ/YD <sup>2</sup> )
0.76
CLO/(G/M <sup>2</sup> )
0.022



# CONTUR

## LOW BULK WARMTH

Delivering industry-leading warmth in a revolutionary thin package, Climashield® Contur is the slimmer side of continuous filament insulation. Breathable and engineered to move with the body, the insulation is the perfect solution for active use in cold weather. Climashield® Contur is also 100% recyclable.



GREAT FOR:  
**OUTERWEAR, GLOVES  
& FOOTWEAR**



### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
2.8	94
3.6	121
4.5	151
5.7	193
6.9	235
8.4	283

### THICKNESS

IN	CM
0.34	0.9
0.38	1.0
0.45	1.1
0.53	1.3
0.58	1.5
0.60	1.5

### WARMTH

CLO
1.57
1.80
2.11
2.41
2.58
2.78

# CONTUR HD

## HIGH DENSITY STRETCH

Building on the foundation of the popular CONTUR product, this iteration is designed specifically for glove and footwear applications. Climashield® CONTUR HD decreases loft in exchange for enhanced strength and durability, so the insulation inside lasts as long as the fabric outside.



GREAT FOR:  
**GLOVES & FOOTWEAR**

### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
2.6	89
3.4	114
4.6	157
5.7	193
6.4	218
7.7	260

### THICKNESS

IN	CM
0.18	0.46
0.20	0.52
0.23	0.58
0.24	0.60
0.26	0.67
0.28	0.72

### WARMTH

CLO
1.02
1.16
1.26
1.31
1.41
1.43



# ELITE

## LAVISH WARMTH

Climashield® Elite provides restful sleep, whether tucked away in a hotel or nestled in a tent. Hypoallergenic with a cozy feel, this product touts all the durability advantages of continuous filament insulation, maintaining its original integrity after repeated use and laundering.



GREAT FOR:  
**QUILTS, COMFORTERS  
& SLEEPING BAGS**



### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
3.0	102
3.5	119
4.5	153
5.5	186
6.5	220

### THICKNESS

IN	CM
1.0	2.5
1.3	3.3
1.6	4.1
2.0	5.1
2.4	6.1

### WARMTH TO WEIGHT

CLO/(OZ/YD <sup>2</sup> )
0.65
CLO/(G/M <sup>2</sup> )
0.019

STANDARD WIDTH:  
60 inches, 152 cm

# PRISM

## PERFORMANCE

Engineered to provide lightweight warmth, Climashield® PRISM is the perfect choice for performance insulation demands. Climashield®'s proprietary AquaBan® technology ensures that the gear retains warmth, even in the midst of wet or humid conditions. Offering unsurpassed durability after repeated use and washings, Climashield® PRISM maintains thermal efficiency throughout the life of the product without the need for scrims or downproof fabrics.



GREAT FOR:  
**OUTERWEAR &  
SLEEPING BAGS**

### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
2.6	88
3.0	102
4.0	136
5.0	170
6.0	203

### THICKNESS

IN	CM
0.8	2.0
0.9	2.3
1.2	3.0
1.5	3.8
1.6	4.1

### WARMTH TO WEIGHT

CL0/(OZ/YD <sup>3</sup> )
0.76
CL0/(G/M <sup>3</sup> )
0.022



PRISM

# HL

## HIGH LOFT

Climashield® HL is a premium continuous filament insulation solution for lasting protection from the outdoor elements. With unparalleled durability, the insulation preserves warmth and original shape, even after multiple washings and repeated use.



GREAT FOR:  
**OUTERWEAR &  
SLEEPING BAGS**

# HL

### WEIGHT

OZ/YD <sup>2</sup>	G/M <sup>2</sup>
2.7	92
3.0	102
4.0	136
5.0	170
5.5	186

### THICKNESS

IN	CM
0.8	2.0
0.9	2.3
1.2	3.0
1.5	3.8
1.6	4.1

### WARMTH TO WEIGHT

CLO/(OZ/YD <sup>2</sup> )
0.73
CLO/(G/M <sup>2</sup> )
0.022



# PROTECT-FR

## FLAME RETARDANT

Climashield® PROTECT-FR provides protection against cold temperatures and momentary exposure to flames. The product features Climashield's signature properties including durable warmth throughout the life of the garment and dimensional stability after repeated use, maintaining its shape for up-to 50 industrial launderings.

As the product is strictly a component and not an end article, manufacturers should conduct independent testing on finished garments to determine suitability to specific standards.



**GREAT FOR:**  
**OUTERWEAR, SLEEPING BAGS**  
**GLOVES & FOOTWEAR**

PROPERTY		WEIGHT 1	WEIGHT 2	WEIGHT 3	WEIGHT 4	VARIABILITY	
Weight (+/-10%)	oz/yd <sup>2</sup>	4.0	5.5	6.7	8.0	± 10%	ASTM D3776A Test Method
	g/m <sup>2</sup>	136	186	227	271		
Thickness	cm	1.0	1.3	1.4	1.5	± 10%	ASTM D573 Test Method
	in	0.39	0.51	0.55	0.59		
Thermal Resistance	clo	1.8	2.3	2.4	2.6	± 5%	ASTM C518-04 Test Method
	R-value	1.6	2.0	2.1	2.3		
Shrinkage (50 cycles)	%	< 3.0%	< 3.0%	< 3.0%	< 3.0%	N/A	ISO 15797 Table 4 Test Method
Vertical Burn	Char Length (inches)	< 6	< 6	< 6	< 6	< 6	ASTM D6413 Test Method
	After Flame (seconds)	< 2	< 2	< 2	< 2	< 2	
	Afterglow (seconds)	0	0	0	0	0	
	Drip	No	No	No	No	No	

To ensure shrinkage values listed above, product must be quilted in diamond pattern with quilt spacing less than or equal to 4 inches.

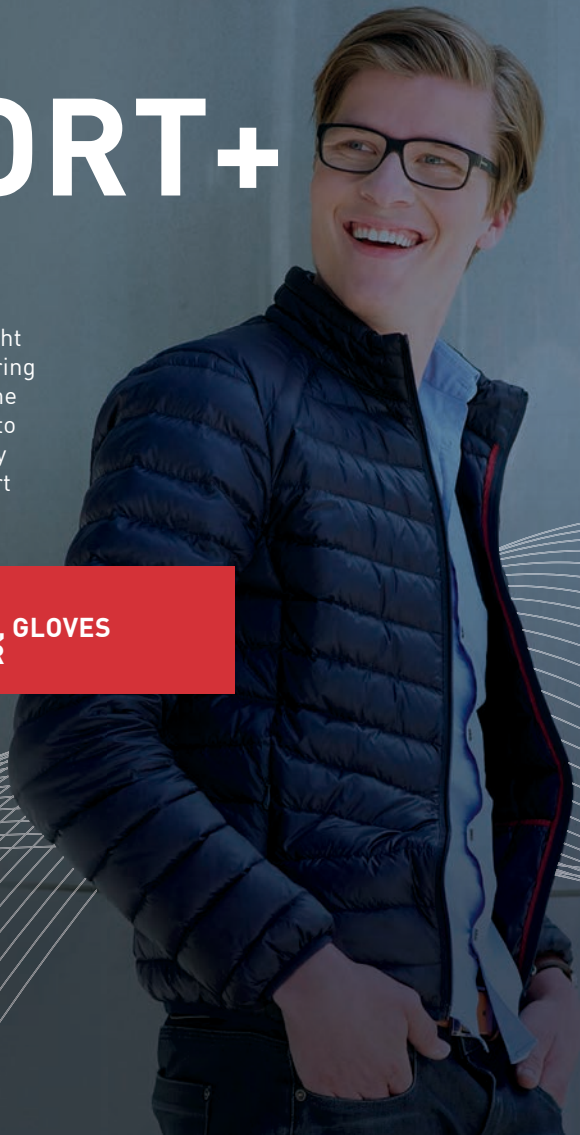
# COMFORT+

## SOFT AND FLEXIBLE

Climashield® Comfort+ is a lightweight continuous filament insulation delivering superior warmth in a soft package. The flexible construction allows the body to move freely and inherent breathability provides an extended range of comfort during various levels of activity.



GREAT FOR:  
**OUTERWEAR, GLOVES  
& FOOTWEAR**



# RECOMMENDATIONS FOR USE

## REQUIRED HANDLING

- Climashield® batting should be allowed to recover if vacuum packed prior to cutting. For best results, remove outer bag and lay flat for 24 hours.
- Do not store rolls of Climashield® technical insulation on end.

## DESIGN

- Quilting may be reduced or eliminated when using Climashield®.
- The direction of batting is critical if minimal quilting is used. Batting width must be placed in the direction of the greatest weight.

# SEWING

Climashield® construction requires specific sewing fittings and adjustments for ease of stitching. Most important are:

- Closed toe foot-upturned
- Feed dog-throat combinations should be as closed as possible to prevent snagging
- Throat plate with proper needle hole size
- Presser foot, pressure-adjusted for consistent fabric feeding
- Needle size depends on operation and bulk
- Feed dog-throat plate should be aligned to provide nick-free surfaces
- The only required stitching, aside from design aesthetics, is at the edges where filament ends occur.

## FABRIC OPTIONS

Special carrier fabrics are not required for any of the Climashield® polyester products. Neither nonwoven materials nor expensive downproof fabrics are required. This offers manufacturers expanded style options, unlimited by the restrictions posed by down and microfiber insulation. However, fabric construction must be tight enough to inhibit fiber migration.

TO PURCHASE CLIMASHIELD® PRODUCTS, PLEASE CONTACT:

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