

HPFR WORKWEAR

LAKELAND'S FR/AR LAYERING SYSTEM

EACH LAYER HAS A PURPOSE

Whether you're working on a sizzling summer day or in -10 degree weather, Lakeland's FR/AR Layering System offers the performance, protection, and comfort you need. Permanent moisture wicking properties engineered with inherently FR fabrics ensure your year-round comfort and safety.

BASE



MID



OUTER



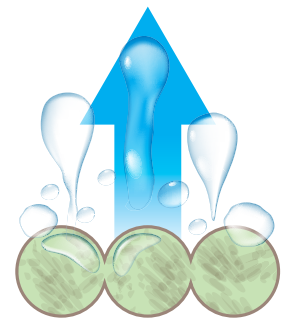
Base layers are the foundational key to the Lakeland FR/AR Layering System. For you to be cool in the heat of summer and warm in the frigid cold, you need to be dry. Base layer shirts have the optimal 60/40 blend of hydrophobic and hydrophilic fibers to constantly pull moisture away from your body, move it to the outer surface of the garment, and allow it to dry. Staying dry is the key to keeping you comfortable and better protected.

Mid layers are the versatile garments that can help take the chill off for a few hours on a fall morning or provide an extra layer of insulation for those long, frigid winter days. Paired with a base layer, mid layers continue to pull moisture away from your body and move it to the outermost garment so it can dry. Lightweight, effective fabrics let mid layers increase comfort without reducing mobility.

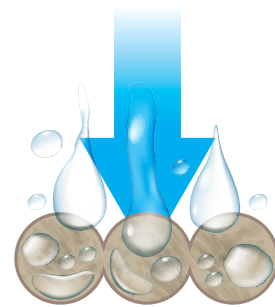
Outer layers complete the Layering System, giving you the comfort and protection, you demand. Moisture wicking fabrics continue the process of pulling moisture away from your body to the outermost layer so that it can dry, while the wind resistant / water resistant fabrics help keep the elements at bay so you can focus on the task at hand.

MOISTURE WICKING FABRICS

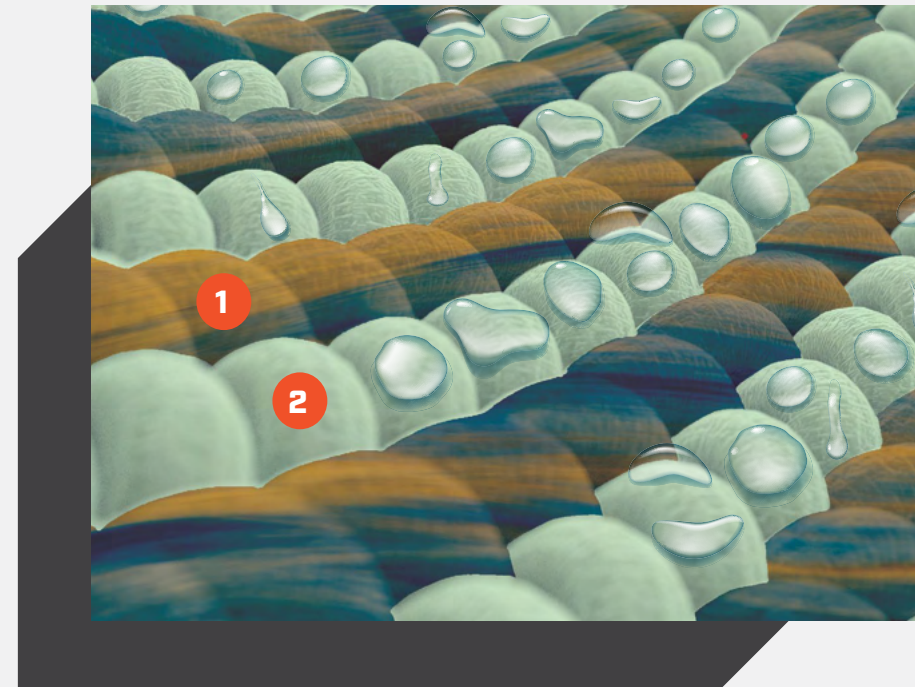
THE KEY TO COOL SUMMERS & WARM WINTERS



HYDROPHOBIC FIBERS
REPEL MOISTURE



HYDROPHILIC FIBERS
ATTRACT MOISTURE



How Does Moisture Wicking Work?

The act of wicking moisture away from the body is rooted in science. A superior moisture wicking garment will:

1. Absorb moisture and sweat with hydrophilic fibers
2. Push moisture and sweat away from the body with hydrophobic fibers, then pull the moisture and sweat through the garment to the outside for quick dispersion and drying

Why Moisture Wicking Matters

Choosing FR workwear plays a critical role in worker safety and comfort. Looking for shirts, pants, and outerwear with moisture-wicking properties can help:

- **Help Prevent Heat Stress**
Prevent heat stress to avoid overheating and heat stroke.
- **Provide an Effective Base Layer**
Staying warm during the winter months starts with fabrics that can quickly pull sweat away from your skin to keep you warm and dry.

Moisture Wicking Fibers?

Superior moisture wicking fabrics combine two types of fibers together: **hydrophobic** (water repelling) fibers and **hydrophilic** (water attracting) fibers. Hydrophobic fibers are synthetic and include nylon, aramids, and modacrylics. Hydrophilic fibers like cotton, wool, and lyocell feel natural against the skin.

Spun together with precision, the fibers combine to form a garment with permanent moisture wicking technology.

Moisture-Wicking Fabrics and Technology

Moisture-wicking fabrics were originally created to help boost athletic performance in extreme outdoor situations by keeping athletes drier and cooler in hot conditions, and warmer and drier in cold weather.

The original moisture-wicking fabrics coat a synthetic fiber like polyester with a chemical finish that allows moisture to spread. Eventually this finish washes out and the fabric loses its wicking abilities. These "original" fabrics are still in the marketplace and can be easily identified.

CHECKING THE TAG ON A GARMENT WILL REVEAL ITS BLEND OF FIBERS. A GARMENT WITH 100% OF ANY FIBER, ALONG WITH CLAIMS OF MOISTURE-WICKING, IDENTIFIES THE PRESENCE OF A FABRIC WITH A CHEMICAL FINISH.

Lakeland High Performance FR apparel takes moisture wicking to the next level, because how quickly you feel dry and comfortable matters all year long. All High Performance FR Fabrics from Lakeland incorporate these key features to pull moisture from your body and help it dry quickly so you can stay comfortable regardless of the temperature or season.



AIR PERMEABILITY

Breathability of the fabric, or air permeability, is important to keep you cool on the job.



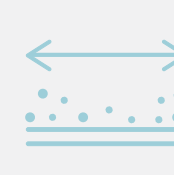
VERTICAL MOISTURE WICKING

Vertical moisture wicking measures how well a garment pulls moisture off of your skin into the fabric.



TRANSPORT OF MOISTURE

Transport of moisture refers to a garment's ability to move moisture through the fabric to the outside surface.



SPREAD OF MOISTURE

Spread of moisture measures how quickly moisture spreads on the surface. The faster it spreads dictates how quickly you will feel dry.



WATER VAPOR TRANSMISSION RATE

Water vapor transmission rate measures how quickly moisture dissipates through a garment.

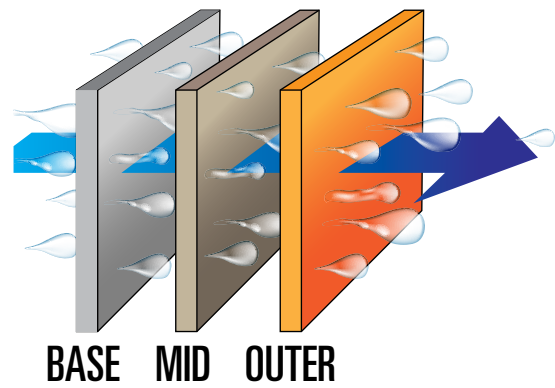
FR LAYERING

FOR WARM, DRY WINTERS

Understanding FR Layering Systems

A layering system is designed specifically to work together layer by layer to keep you dry and warm. Starting with a base layer that consists of permanent moisture-wicking fibers, each additional outer layer should have the same characteristics to keep the elements out and wick moisture away from your body.

- The **base layer** (or next-to-skin garment) must offer permanent moisture-wicking capabilities to keep you feeling dry by pulling sweat off your skin quickly. Why? Because a moisture-wicking chemical finish will eventually wash away.
- Every additional layer, whether it is a **mid layer** button up shirt or **outer layer** hooded sweatshirt or jacket, must all be created with permanent moisture-wicking capabilities to pull moisture through the fabric and dissipate the moisture on the outer surface.
- If moisture gets trapped between layers, you will begin to feel damp and cold. All layers must work together to keep the elements out and wick moisture away so you can stay dry and maintain warmth.

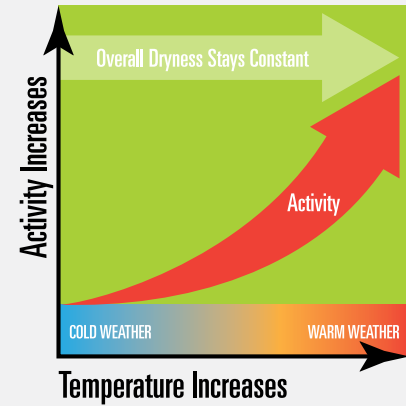


Understanding the correct way to layer apparel to maintain body temperature, dryness and protection from the elements takes more than just a system—it takes a system with the right fabrics and technology.

Moisture-wicking Matters for Warmth

As you add and remove layers in cold weather climates, you rely on your FR garments to offer you protection, comfort and dryness. Lakeland FR garments feature a **60/40** hydrophobic/hydrophilic fiber blend, which means you are getting the optimal moisture-wicking benefits from your apparel.

As your activity level increases, you shouldn't notice a difference in overall dryness. Permanent moisture-wicking fibers in your layering system should work to keep you dry with every added layer so you never feel wet on the job.



As temperatures fluctuate, your layering system should work *with* you to keep you both dry and warm. A layering system designed to function effectively in all climates, regardless of activity level, is the ultimate goal.



EVERY LAYER OF APPAREL YOU WEAR ON THE JOB MATTERS.

EACH LAYER SHOULD INCLUDE PERMANENT MOISTURE-WICKING TO ENSURE THE EFFECTIVENESS OF YOUR TOTAL SYSTEM. NEXT TO SKIN IS MOST IMPORTANT FOR COOLING AND DRYNESS BUT EACH LAYER MUST MOVE MOISTURE AWAY FROM THE BODY.

Working in the cold is no easy task. As you work in freezing, unforgiving winter weather, the ability to effectively layer protective apparel is essential, not only for safety, but also for flexibility and optimal performance as temperatures and the elements outside fluctuate.

Lakeland's hoodie and jacket are water and wind resistant PLUS moisture wicking. Keeping out the elements while moving moisture away from your body is the key to the performance of an effective layering system.

BASE

MID

OUTER



UNDERSTANDING ARC FLASH PROTECTION

WHEN LAYERING GARMENTS

When wearing multiple garments, that specific combination of clothing must be tested together to determine their effective arc rating. Lakeland's FR/AR Layering System offers some of the highest levels of protection in the industry. Add the benefits of inherent FR properties, lightweight fabrics and permanent moisture wicking technology and you have superior performance, protection and comfort.

BASE + **MID** = **28 cal/cm² CAT 3**

HPFR KNIT
(long sleeve or long sleeve Henley style)
ATPV: 16.4 cal/cm²

WESTEX® DH SHIRT
ATPV: 8.9 cal/cm²

HPFR KNIT + **HPFR 8.0 oz WAFFLE CUT JACKET** = **43 cal/cm² CAT 4**

HPFR KNIT
(long sleeve or long sleeve Henley style)
ATPV: 16.4 cal/cm²

HPFR 8.0 oz WAFFLE CUT JACKET
ATPV: 9.7 cal/cm²

HPFR KNIT + **HPFR SWEATER KNIT** = **45 cal/cm² CAT 4**

HPFR KNIT
(long sleeve or long sleeve Henley style)
ATPV: 16.4 cal/cm²

HPFR SWEATER KNIT
ATPV: 14 cal/cm²

BASE + **MID** + **OUTER** = **57 cal/cm² CAT 4**

HPFR KNIT
(long sleeve or long sleeve Henley style)
ATPV: 16.4 cal/cm²

HPFR 8.0 oz WAFFLE CUT JACKET
ATPV: 9.7 cal/cm²

HPFR ZIP JACKET
ATPV: 28 cal/cm²

HPFR KNIT + **WESTEX® DH SHIRT** + **HPFR ZIP OR PULLOVER HOODIE** = **58 cal/cm² CAT 4**

HPFR KNIT
(long sleeve or long sleeve Henley style)
ATPV: 16.4 cal/cm²

WESTEX® DH SHIRT
ATPV: 8.9 cal/cm²

HPFR ZIP OR PULLOVER HOODIE
ATPV: 28 cal/cm²

HPFR KNIT + **WESTEX® DH SHIRT** + **HPFR ZIP JACKET** = **60 cal/cm² CAT 4**

HPFR KNIT
(long sleeve or long sleeve Henley style)
ATPV: 16.4 cal/cm²

WESTEX® DH SHIRT
ATPV: 8.9 cal/cm²

HPFR ZIP JACKET
ATPV: 28 cal/cm²