We’ve tackled many a worker issue over the past three decades – none as serious or mission critical as FR. And so, we couldn’t be more proud to add CORE Performance Work Wear® FR to our top flight, battle-tested lineup of Tenacious Work Gear®. Made of the best fabric technologies on the planet that provide certified arc and flash fire protection – all designed with worker comfort, performance, and even swagger in mind. This fashion-forward, flame-squelching gear would make even Vulcanus Rex himself stop and think twice. In this handy dandy booklet, you will find all the knowledge, education, stats and FAQs you’ll need to bone up on the essential whys and wherefores of FR. The best part (we humbly think) are the bountiful protective solutions contained herein that will take care of workers on the job and, most importantly, ensure they get home safely at the end of each day and back on the job tomorrow.

JUST BECAUSE WE DIDN’T START THE FIRE, DOESN’T MEAN WE CAN’T PUT IT OUT.
Each year, hundreds of burn injuries and deaths are recorded from workers exposed to open flame, high heat, flash fire or arc flash without proper personal protective equipment (PPE). Getting into the numbers a bit... In 2010, the U.S. Bureau of Labor Statistics reported approximately 200 worker fatalities due to fire and explosions. That’s 200 too many in our book. And according to data from the National Fire Protection Association, the National Safety Council, and the Bureau of Labor Statistics, 5 to 10 arc flash accidents happen every day across the U.S. with more than 3,600 disabling electrical contact injuries each year. It doesn’t take a math degree to see that arc flash and flash fires are a matter of life and death. So, what’s the solution? We start with education.

**National Fire Protection Association (NFPA 70E)**
- Electrical safety standard aimed at end users that operate in the electrical utility industry.
- Serves as a “how-to” guide to electrical arc safety.
- Defines the level of arc rating (hazard-risk categories or HRCs) needed by clothing to perform specific hazardous tasks where the potential for an arc flash exists.
- HRC levels provide a minimum ATPV or E_{BT} rating which is part of the testing requirements for ASTM F1506, the design standard for manufacturers to follow when making flame-resistant clothing.
- All CORE FR garments appropriate for applications governed by NFPA 70E will be noted by the HRC level tech tag.

**National Electrical Safety Code® (NESC®)**
- Voluntary standard published by the Institute of Electrical and Electronics Engineers (IEEE).
- Used by electrical utilities to implement safety procedures for utility workers.
- Requires utilities to perform a risk assessment and then requires workers to wear flame-resistant clothing with an effective HRC rating equal to the risk.
- Most utility workers need to be in a minimum 8 cal/cm² arc-rated garment which can also be achieved through layering.
- All CORE FR that has received an arc-rating will be noted with this tech tag.

**National Fire Protection Association (NFPA 2112)**
- Provides requirements for design, performance, certification requirements, and test methods for FR garments for use in areas at risk from flash fires. If a potential for flash fire exists, employees are required to wear flame-resistant clothing.
- Rigorous 3rd party testing required, along with garment certification, which requires an independent third-party organization to review & certify a finished garment guaranteeing that the whole product (from fabric to thread to zippers, buttons and trims) meet the standard’s specifications & testing requirements.
- As part of this garment certification, NFPA 2112 also requires an ongoing audit for FR garment manufacturers to verify their quality control process and ensure compliance.
- All CORE FR that has been 3rd party certified to this standard will be noted with this tech tag.

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**Need more FR Resources?**
White Papers available to support FR training needs all available at www.ergodyne.com
WHY SHOULD WORKERS WEAR FLAME-RESISTANT CLOTHING?

A. INCREASE CHANCE OF SURVIVAL.
FR clothing saves lives in the case of an incident. Take a look at the chart below:

In the unlikely event of a flash fire or arc flash, FR clothing reduces burn injury (all fabric must not allow body burns of over 50%) and provides precious escape time, which increases chances of survival and dramatically reduces injury severity.

B. REDUCE COST. The cost of an entire FR clothing program will pale in comparison to any medical and legal costs you’ll incur due to a severe burn injury. Five to ten arc flash accidents occur every day in the U.S., and when an arc flash incident occurs, no matter how insignificant, it will result in significant costs to an employer. Average direct cost is over 2 million dollars per injury, whether it’s lost work days, a permanent disability or death.

C. KEEP WORKERS COMPLIANT. Besides the cost of an incident, FR clothing is required in industries where arc flash or flash fires can occur. OSHA can and does fine employers who fail to provide the proper safety equipment for workers, including FRCs. Not complying with the laws can leave your company open to fines from OSHA and litigation from other sources.

INDUSTRY-LEADING TECHNOLOGY PARTNERS TO ENSURE COMPLIANCE

When arc flash and flash fires are a risk, it’s no time to cut corners especially when it comes to your workers’ last line of defense – the clothes they wear. That’s why choosing trusted fabrics is not only mission critical, it also can be life-saving. These industry-leading, US fabric manufacturers use top notch materials to ensure compliance and superior comfort, quality, durability – and, most importantly, protection against arc flash and flash fires.
Flame-Resistant Base Layer Long Sleeve: Relaxed fit, lightweight and arc-rated for maximum comfort and protection.

- HRC 1 | ATPV rating 7.4 cal/cm² (body) | ATPV rating 6.0 cal/cm² (side vents) | NFPA 70E
- 5.8 oz. (195g/m²), 90% cotton / 10% spandex (body); 5.3 oz. (180g/m²) knit, 85% cotton / 8% Polyester / 7% Spandex (side vents)
- Moisture wicking material and venting for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabric, flat seams, long tail cut, relaxed fit
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 1 according to NFPA 70E
- CSA-Z462 compliant

Flame-Resistant Underwear: Arc-rated, relaxed fit boxers offering comfort and maximum breathability.

- HRC 1 | ATPV rating 7.4 cal/cm² | NFPA 70E
- 5.8 oz. (195g/m²), 90% cotton / 10% spandex
- Moisture wicking material for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabric, flat seams, wide woven waistband, relaxed fit
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 1 according to NFPA 70E
- CSA-Z462 compliant
FOR CORE PERFORMANCE WORK WEAR®

Flame-Resistant Crew Neck Long Sleeve: Lightweight, ultra-soft mid-layer for enhanced comfort, breathability and fit. Dual hazard solution for both flash fire and arc flash applications.

- HRC 2 | ATPV rating 8.2 cal/cm² | NFPA 70E | NFPA 2112
- 6.7 oz. (230g/m²) 45% modacrylic / 35% lyocell / 20% meta-aramid
- Moisture wicking material for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabric, flat seams, long tail, relaxed fit
- Front chest pocket for storage
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 2 according to NFPA 70E, and is a UL certified NFPA 2112 garment
- CSA-Z462 compliant

Flame-Resistant Henley Long Sleeve: Professional yet comfortable providing dual-hazard protection.

- HRC 2 | ATPV rating 8.2 cal/cm² | NFPA 70E | NFPA 2112
- 6.7 oz. (230g/m²) 45% modacrylic / 35% lyocell / 20% meta-aramid
- Moisture wicking material for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabric, flat seams, long tail, relaxed fit
- Front chest pocket for storage
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 2 according to NFPA 70E, and is a UL certified NFPA 2112 garment
- CSA-Z462 compliant

TECH TAGS:

ITEM # SIZE COLOR
40422 S Heather Gray
40423 M Heather Gray
40424 L Heather Gray
40425 XL Heather Gray
40426 2XL Heather Gray
40427 3XL Heather Gray

ITEM # SIZE COLOR
40432 S Navy
40433 M Navy
40434 L Navy
40435 XL Navy
40436 2XL Navy
40437 3XL Navy

ITEM # SIZE COLOR
40442 S Heather Gray
40443 M Heather Gray
40444 L Heather Gray
40445 XL Heather Gray
40446 2XL Heather Gray
40447 3XL Heather Gray

ITEM # SIZE COLOR
40452 S Navy
40453 M Navy
40454 L Navy
40455 XL Navy
40456 2XL Navy
40457 3XL Navy

www.ergodyne.com 800 225-8238
FLAME-RESISTANT PULLOVER HOODED FLEECE SWEATSHIRT

- Heavy-duty sweatshirt providing dual hazard protection for both arc flash and flash fires.
- HRC 2 | ATPV rating 18.0 cal/cm² | NFPA 70E | NFPA 2112
- 12.4 oz. (420g/m²), 100% FR cotton knit
- Moisture wicking material for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabric & cuffs, flat seams, double lined attached hood with adjustable lace closure, front kangaroo pocket to warm hands
- Hidden zip-up arm pocket for key or cellphone storage
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 2 according to NFPA 70E, and is a UL certified NFPA 2112 garment
- CSA-Z462 compliant

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FLAME-RESISTANT ZIP-FRONT HOODED FLEECE SWEATSHIRT

- Maximum storage, comfort, and dual hazard protection for a perfect FR solution.
- HRC 2 | ATPV rating 18.0 cal/cm² | NFPA 70E | NFPA 2112
- 12.4 oz. (420g/m²), 100% FR cotton knit
- Moisture wicking material for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabric & cuffs, flat seams, double lined attached hood with adjustable face closure
- Storage: multiple front pockets for extra storage; hidden zip-up arm pocket for key or cellphone storage
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 2 according to NFPA 70E, and is a UL certified NFPA 2112 garment
- CSA-Z462 compliant

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Flame-Resistant Unlined Coverall: Cool, comfortable, and breathable coverall that provides dual hazard FR protection.

- HRC 2 | ATPV rating 9.0 cal/cm² (Khaki & Gray) | ATPV rating 10.1 cal/cm² (Dark Navy) | NFPA 70E | NFPA 2112
- 7 oz. (240g/m²) blend of 48% modacrylic/37% lyocell/15% aramid (Khaki & Gray); 7 oz. (240g/m²) blend of 45% modacrylic/35% lyocell/20% aramid (Dark Navy)
- Moisture wicking material for multi-climate comfort
- Anti-stink treatment helps workers remain unscented
- Comfort design: stretch fabrics, flat seams, long tail, drawstring head, spread collar, action back
- Storage: Two chest flap front pockets, two hip pockets, multiple tool and utility pockets
- Brass Nomex® FR full-front, two-way zipper with protective flap
- Wide leg design for easy on/off
- Visible FR tags including HRC level to ensure workers are wearing compliant gear
- Arc-rated (AR); meets the requirements of ASTM F1506, classified HRC 2 according to NFPA 70E, and is a UL certified NFPA 2112 garment
- CSA-Z462 & CGSB 155.20 compliant

### 7490: (CHEST SIZES 38” - 50”)

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### 7490X: (CHEST SIZES 52” - 54”)

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OUR COMMITMENT TO LABELING FR ACCESSORIES

Arc and flash fires are serious issues and as a safety manufacturer dedicated to Making the Workplace a Betterplace™, we are committed to FR education and providing FR-compliant gear.

Winter liners and hi-visibility vests that are made of polyester with topical FR treatments are often inaccurately believed or reported to be FR-compliant. The topical treatment does help the liner or vest self-extinguish but only after the flame source is removed. As long as the flame is present, polyester will do what polyester does: melt, drip, and burn. On winter liners, this treatment is often described as a “single wash,” meaning it will be ineffective after one laundering. On hi-visibility vests, this treatment may last up to 25 washes.

Treated polyester products do not meet any FR garment standard appropriate for arc flash or flash fire hazards such as ASTM F1506 or NFPA 2112. If the job calls for workers to wear clothing compliant to any of the FR garment standards, it is critical that they do not wear PPE with a topical FR treatment.

Rest assured, Ergodyne’s FR products use trusted, compliant materials like Banox FR3® cotton, Nomex®, or modacrylic blends. All are sewn with flame resistant Nomex® or meta-aramid threads and utilize FR components as per the appropriate FR performance requirements. Our FR-compliant products provide a level of protection well beyond topically treated polyester and are appropriate for use in both arc and flash fire applications.

All Ergodyne FR-compliant accessory products are noted with an FR Tech Tag.
TECH TAGS: FR 3-layer Extreme Series Winter Liner: Inherent modacrylic blend fabrics with 3M™ FR Thinsulate™ to provide extreme warmth and protection.

- 3-Layer Modacrylic twill / FR Thinsulate™ / Modacrylic fleece (ATPV rating of 27 cal/cm²)
- Shell: Modacrylic cotton blend twill
- Mid-Layer: 3M™ FR Thinsulate™
- Lining: Modacrylic cotton blend fleece
- Meets requirements of ASTM F1506 and NFPA 70E (HRC 3)
- Elastic gather at forehead
- Warming Pack Pockets
- Hook and Loops for hard hat suspension

ITEM # SIZE COLOR
16890 — Black
16892 — Black

TECH TAGS: Nomex Balaclava: Stretchable Nomex fleece keeps head and neck comfortable while providing FR protection.

- Nomex® fleece
- Meets requirements of ASTM F1506 and NFPA 70E (HRC 2)
- Arc-rated; ATPV of 9.7 cal/cm²
- Reflective accents for higher visibility
- Stretchable and comfortable

ITEM # SIZE COLOR
16825 — Black


- 2-Layer Modacrylic twill / Modacrylic fleece construction
- Shell: Modacrylic cotton blend twill
- Lining: Modacrylic fleece
- Meets requirements of ASTM F1506 and NFPA 70E (HRC 2)
- Arc-rated; (ATPV rating of 20 cal/cm²)
- Elastic gather at forehead
- Warming Pack Pockets
- Hook and Loops for hard hat suspension

ITEM # SIZE COLOR
16880 — Black
16882 — Black
**TECH TAGS:**

Two-way Cold Series FR Winter Liner: Versatile design with detachable upper and lower sections to provide the ultimate in winter and FR protection.

- Upper section: Modacrylic twill/Modacrylic fleece lining (ATPV rating of 20 cal/cm²)
- Lower section: Double layer modacrylic blend rib knit (ATPV rating of 17.0 cal/cm²)
- Meets requirements of ASTM F1506 and NFPA 70E (HRC 2)
- Nomex Metal Zipper
- Hook and Loops for hard hat suspension
- Warming Pack Pockets

**ITEM # SIZE COLOR**

16885 — Black

---

**TECH TAGS:**

FR 2-layer Cold Series Mouthpiece: Adjustable face protection that fits perfectly with an FR winter liner.

- 2-Layer mouthpiece – Modacrylic twill/Modacrylic fleece (ATPV rating of 20 cal/cm²)
- Shell: Modacrylic cotton blend twill
- Lining: Modacrylic cotton blend fleece
- Meets requirements of ASTM F1506 and NFPA 70E (HRC 2)
- Attach to a winter liner for face coverage

**ITEM # SIZE COLOR**

16872 — Black

---

**TECH TAGS:**

FR Multi-band: Supreme FR protection and performance with a multitude of uses and ways to wear.

- Inherent FR Nomex® knit fabric (ATPV rating of 4.2 cal/cm²)
- Meets requirements of ASTM F1506; classified HRC1 under NFPA 70E
- Anti-stink treatments help workers remain unscented
- Multi-climate usage, blocks wind, sun and dust
- Stretchable, comfortable and seam-free
- Machine washable
- One size fits most

**ITEM # SIZE COLOR**

42201 — Navy

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**TECH TAGS:**

Premium Phase Change Vest: Constant 58°F keeps workers cooler, safer, and more productive while providing FR protection.

- Maintains constant 58°F / 14°C
- Cooling lifecycle lasts up to 4 hours
- Comfortable cotton construction with hook & loop closure
- Extended vest surface area to enhance cooling power
- Modacrylic cotton blend FR fabric
- Fabric meets ASTM F1506 requirements (ATPV rating of 7.1 cal/cm²); classified HRC1 per NFPA 70E.
- Non-toxic, non-carcinogenic, dialectic substance
- Elastic pen loop
- 6200HV designed with reflective accents for visibility

**PREMIUM 6200: COOLING VEST + PACKS**

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**PREMIUM 6200HV: COOLING VEST + PACKS**

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**TECH TAGS:**

Evaporative FR Cooling Bandana: Activated polymers bring cooling relief along with FR protection.
- Bandana/headband – tie closure
- Modacrylic cotton FR blend
- Meets ASTM F2302 criteria for flame resistance
- Fabric meets ASTM F1506 requirements (Arc rating of 7.1 cal/cm²); classified HRC1 per NFPA 70E
- Soak in water for 2-5 minutes to activate
- Remains hydrated for up to 4 hours
- Reusable, just re-soak

**ITEM #** | **SIZE** | **COLOR**
--- | --- | ---
12601 | Hi-Vis Lime
12607 | Solid Blue

**TECH TAGS:**

Evaporative FR Cooling Bandana with hook and loop closure: Activated polymers bring cooling relief along with FR protection.
- Bandana/headband – hook and loop closure
- Modacrylic cotton FR blend
- Meets ASTM F2302 criteria for flame resistance
- Fabric meets ASTM F1506 requirements (Arc rating of 7.1 cal/cm²); classified HRC1 per NFPA 70E
- Soak in water for 2-5 minutes to activate
- Remains hydrated for up to 4 hours
- Reusable, just re-soak

**ITEM #** | **SIZE** | **COLOR**
--- | --- | ---
12611 | Hi-Vis Lime
12617 | Solid Blue

**TECH TAGS:**

Evaporative FR Cooling Triangle Hat: Activated polymers bring cooling relief along with FR protection.
- Triangle Hat
- Modacrylic cotton FR blend
- Meets ASTM F2302 criteria for flame resistance
- Fabric meets ASTM F1506 requirements (Arc rating of 7.1 cal/cm²); classified HRC1 per NFPA 70E
- Soak in water for 2-5 minutes to activate
- Remains hydrated for up to 4 hours
- Reusable, just re-soak

**ITEM #** | **SIZE** | **COLOR**
--- | --- | ---
12621 | Hi-Vis Lime
12627 | Solid Blue

**TECH TAGS:**

FR Hard Hat Pad w/Shade: Pad with long shade to provide ultimate cooling relief along with FR protection.
- Protects neck from harmful UV rays
- Modacrylic cotton blend FR fabric
- Fabric meets ASTM F1506 requirements (ATPV rating of 7.1 cal/cm²); classified HRC1 per NFPA 70E.
- Meets ASTM F2302 for flame resistance
- Soak in water 2-5 minutes to activate
- Remains hydrated for up to 4 hours
- Conveniently attaches to hard hat suspension headband
- Reusable, just re-soak

**ITEM #** | **SIZE** | **COLOR**
--- | --- | ---
12657 | Solid Blue

www.ergodyne.com 800 225-8238
1. HOW CAN WORKERS TELL THE DIFFERENCE BETWEEN CORE FR AND CORE NON-FR APPAREL?
A. CORE FR is clearly marked on the exterior of the garment with an FR tech tag, making it easy to distinguish from non-FR CORE garments. All packaging including hangtags will also note this tech tag:

   ![FR Tag]

   In fact, all compliant, FR Ergodyne products will note this tag, so workers can be sure they’re getting the protection they need from head to toe.

2. CAN FLAME-RESISTANT CHEMICALS OR PROPERTIES BE WASHED OUT?
A. Whether the material is engineered at the fiber level (i.e. inherent blends) or at the fabric level (treated cotton), the flame-resistant properties in CORE FR fabrics are guaranteed for the life of the garment and cannot be washed out provided that proper laundering procedures are followed.

3. WHAT IS AN HRC?
A. HRC or Hazard Risk Category indicates the level of arc flash protection required for a particular task or application. These are outlined in NFPA 70E. Every FR garment fits into one of five HRCs ranging from 0 to 4 (level 0 being the least amount of protection and 4 representing the most protection). NFPA 70E assigns these categories to garments based on a worker’s task and level of risk. Each HRC requires the worker to wear FR garments with a minimum ATPV/E_{BT} rating, for example: HRC 1 requires PPE of at least 4.0 cal/cm²; HRC 2 requires PPE of at least 8.0 cal/cm².

4. WHAT IS AN ATPV OR E_{BT} RATING?
A. Part of ASTM F1506 requires testing to ASTM F1959 to determine an ARC rating or “Arc Thermal Performance Value” (ATPV or E_{BT}) which is measured in cal/cm². This is the minimum incident energy that a garment can be exposed to and still prevent the onset of second-degree burns.

5. HOW SHOULD AN FR GARMENT FIT?
A. The looser fitting the FR garments, the more thermal protection the clothing system will provide. Air is a very effective insulator; therefore, maintaining an air gap between the clothing and skin will reduce the rate of heat transfer and provide better protection. That said, a loose fit must be balanced against the hazard of clothing being caught in moving equipment.

6. WHAT SHOULD BE WORN UNDERNEATH FR CLOTHING?
A. Natural fibers such as cotton, wool or silk…or even going commando is acceptable! These options are better than a synthetic fiber. If workers wear a polyester base layer underneath an FRC and there is an arc flash or flash fire event, polyester will do what it’s engineered to do: melt and drip (even if it does not directly encounter any flame…simply from the heat alone!). For additional FR protection, workers should add an FR base-layer underneath FR outerwear. This increases the thermal protection of the clothing system by adding “air gaps” that reduce the transfer of heat and therefore injury.
7. WHY SHOULD WORKERS BUY A NFPA 2112 CERTIFIED GARMENT?

A. A certified garment goes above and beyond just using certified materials. Garment certification is performed by an independent third-party organization, such as Underwriters Laboratory (UL). The certification guarantees that the garments themselves have been certified as a whole, finished product, including all items that make up the garment, such as fabric, thread, zipper tape, buttons and trims. As part of this garment certification, an ongoing audit performed by the independent third-party organization is completed for FR garment manufacturing facilities to verify that there is a quality control process and that all garments are being manufactured as certified. Bottom line: A garment that has been NFPA 2112 certified ensures that every bit of that garment meets all the requirements of the NFPA 2112 standard. Garments in CORE FR that are third-party certified will have the tech tag shown to the right.

8. CAN YOU CERTIFY WINTER LINERS AND COOLING HEADGEAR TO NFPA 2112?

A. NO. NFPA 2112 is a garment standard that outlines “the minimum performance requirements and test methods for flame-resistant fabrics and components and the design and certification requirements for garments for use in areas at risk from flash fires.” (Sec 1.1). Sec. 3.3.15 defines “garment” as “clothing, including but not limited to coveralls, trousers, shirts, outerwear and rainwear.” There is no mention of winter accessory products like liners anywhere in NFPA 2112. Why? Because NFPA 2112 is a standard for creating garments that protect the body. When NFPA 2112 defines “upper body” in Sec. 3.3.3.2 it specifically says “The area of the body above the waist and extending to the shoulders, including the arms and wrists but excluding the hands.” No mention of a person’s head or neck. That said, it would make sense for a worker who’s wearing FR garments to also choose compliant FR accessories (like liners).
UL CERTIFIED GARMENTS

ANY GARMENT MARKED WITH UL CERTIFICATION HAS BEEN CERTIFIED TO NFPA 2112 FOR FLASH FIRE.

WHAT DOES THAT MEAN?

This seal guarantees that the garments themselves have been certified as a whole, finished product, including all items that make up the garment, such as fabric, thread, zipper tape, buttons and trims.

It also means that our factories undergo ongoing audits performed by UL to verify that there is a quality control process and that all garments are being manufactured as originally certified.

This is a big deal. It’s an extra step that not all garment manufacturers take.

Any CORE FR model that’s UL-certified to NFPA 2112 for flash fire will show this classification mark:

STAY IN THE KNOW

WATCH A VIDEO ON WHY FABRIC CHOICE MATTERS MOST – AND SIGN UP TO RECEIVE ALL THE LATEST ON CORE FR INCLUDING FR WHITE PAPERS AND CORE FR SAMPLING PROGRAM INFORMATION.
// LAYER UP

HOW TO ACHIEVE A HIGHER LEVEL OF ARC PROTECTION.

The only way you can achieve a higher level of arc protection is to layer up or purchase a heavier garment. Because of the air gaps (when layering clothing), the only way to determine the exact arc rating is to arc test the layers together.

Unfortunately, simple math won’t work. You can’t assume that if one garment has an 8 cal/cm² ATPV rating and the other garment has 10 cal/cm² ATPV rating, that when worn together they would rate an 18 cal/cm². To get an accurate rating, the layers must be arc tested together.

That’s why we conducted ASTM F1959 arc testing on three CORE FR garment combinations. HERE’S HOW THEY RATED:

To equal this high of an arc rating with one garment, you’d need at minimum a 22 oz. fabric (that’s HEAVY!). A layering system minimizes the bulk/weight while still achieving a high level of arc protection.

As the CORE Performance Work Wear® FR line grows, we will conduct more layer testing and share the results with you.
DON'T LET STICKY FINGERS SWIPE YOUR GEAR.

MAKE IT OBVIOUS. MAKE IT YOURS.

Contact us at 800.225.8238 to place your custom order TODAY!
Improperly sized gear is a prime cause of heartache and sadness. Remember when you showed up at school wearing high-water pants? Of course that’s nothing compared to the crack-tacular combination of too-short shirt and too-loose pants. Don’t let these calamities occur. Your gear will be more effective and comfortable if you choose appropriate sizes.

### Base Layer Shirt
**Model 7415**

<table>
<thead>
<tr>
<th>Size</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>X-LARGE</th>
<th>2X-LARGE</th>
<th>3X-LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEST</strong></td>
<td>38-39”</td>
<td>39-42”</td>
<td>43-46”</td>
<td>47-50”</td>
<td>51-54”</td>
<td>55-58”</td>
</tr>
<tr>
<td></td>
<td>92-97 cm</td>
<td>99-108 cm</td>
<td>109-117 cm</td>
<td>118-127 cm</td>
<td>128-137 cm</td>
<td>138-147 cm</td>
</tr>
</tbody>
</table>

*Please note: this model will shrink in the wash, so if measurements are in between sizes, buy the larger size.

### Underwear
**Model 7470**

<table>
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<th>Size</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>X-LARGE</th>
<th>2X-LARGE</th>
<th>3X-LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WAIST</strong></td>
<td>32”</td>
<td>34”</td>
<td>36”</td>
<td>38”</td>
<td>40”</td>
<td>42”</td>
</tr>
<tr>
<td></td>
<td>81 cm</td>
<td>87 cm</td>
<td>92 cm</td>
<td>97 cm</td>
<td>102 cm</td>
<td>107 cm</td>
</tr>
</tbody>
</table>

*Please note: this model will shrink in the wash, so if measurements are in between sizes, buy the larger size.

### Mid Layer Shirts
**Models 7425 // 7430**

<table>
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<th>Size</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
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<th>2X-LARGE</th>
<th>3X-LARGE</th>
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</thead>
<tbody>
<tr>
<td><strong>CHEST</strong></td>
<td>34-36”</td>
<td>37-40”</td>
<td>41-44”</td>
<td>45-48”</td>
<td>49-52”</td>
<td>53-56”</td>
</tr>
<tr>
<td></td>
<td>87-92 cm</td>
<td>93-103 cm</td>
<td>103-112 cm</td>
<td>113-122 cm</td>
<td>124-132 cm</td>
<td>133-142 cm</td>
</tr>
</tbody>
</table>

### Sweatshirts
**Models 7440 // 7445**

<table>
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<tr>
<th>Size</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>X-LARGE</th>
<th>2X-LARGE</th>
<th>3X-LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEST</strong></td>
<td>36-38”</td>
<td>39-41”</td>
<td>43-44”</td>
<td>45-48”</td>
<td>49-52”</td>
<td>53-60”</td>
</tr>
<tr>
<td></td>
<td>92-97 cm</td>
<td>99-103 cm</td>
<td>108-115 cm</td>
<td>113-122 cm</td>
<td>124-132 cm</td>
<td>133-152 cm</td>
</tr>
</tbody>
</table>

### Coverall
**Model 7490**

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<th>SMALL</th>
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<th>LARGE</th>
<th>X-LARGE</th>
<th>2X-LARGE</th>
<th>3X-LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEST</strong></td>
<td>38”</td>
<td>40”</td>
<td>43”</td>
<td>44”</td>
<td>46”</td>
<td>50”</td>
</tr>
<tr>
<td></td>
<td>92 cm</td>
<td>102 cm</td>
<td>107 cm</td>
<td>112 cm</td>
<td>117 cm</td>
<td>127 cm</td>
</tr>
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</table>

### Coverall
**Model 7490X**

<table>
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<tr>
<th>Size</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>X-LARGE</th>
<th>2X-LARGE</th>
<th>3X-LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHEST</strong></td>
<td>52”</td>
<td>54”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>132 cm</td>
<td>137 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Inseams available in all chest sizes:** SHORT (S) 28” // 71cm, REGULAR (R) 30” // 76cm, TALL (T) 32” // 82cm.

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**CHEST:** Measurement should be taken around the fullest part of the chest with arms down, just under the arms and across the shoulder blades.

**WAIST:** Measure around waist (not pulling tightly) at the height you prefer to wear the waistband.

**INSEAM:** Take a pair of pants that fit you well and measure from the crotch to the bottom of the leg.

www.ergodyne.com 800 225-8238
rugged.
ready.
reliable.

WORK GEAR BUILT TO PERFORM.
EVERY DAY. EVERY CONDITION. EVERYWHERE.