

# **ELECTRIC UTILITY** **PORTFOLIO**

**WESTEX**  
A MILLIKEN BRAND

**ENGINEERED FOR PROTECTION.  
OPTIMIZED FOR COMFORT.**




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# FEEL CONFIDENT

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At Westex<sup>®</sup>, we're trusted textile pioneers who create advanced flame-resistant and arc-rated (FR/AR) fabrics that keep hardworking men and women safer, more comfortable and confident in dangerous, demanding jobs around the world.

Market proven, with tens of millions of yards out in the field, our fabrics don't just meet standards—they integrate safety and comfort to deliver the most wearable PPE possible. Our efforts don't stop with engineering and innovation. Through extensive educational outreach, we've helped workers better understand electric arc flash, flash fire and other thermal hazards. We work tirelessly to solve real-world problems that make the industries we serve safer and smarter.



**Download the Westex App  
to explore our collection  
of fabrics.**

[WESTEX.COM/APP](https://www.westex.com/app)

# Delivering Arc Flash Protection for Utility Work.

## THE NEED

In the electric utility industry, the threat of arc flash exposures has necessitated the use of flame-resistant clothing durable enough to withstand up to 35,000 °F. While non-FR clothing can ignite during an arc flash exposure—and continue to burn even after the source of the ignition is removed—arc flash protection fabrics from Westex are designed to self-extinguish, dramatically reducing the burn injury.

## THE STANDARDS

Published by the Institute of Electrical and Electronics Engineers (IEEE), the National Electrical Safety Code® (NESC®) provides guidance on protecting workers during the installation, operation and maintenance of electric supply, communication lines and associated equipment. Additionally, OSHA 29 CFR 1910.269 standards for electric power generation, transmission and distribution require companies to complete a hazard assessment and provide employees with PPE appropriate to the risks of their work environments. The CAN/ULC-S801—a National Standard of Canada—also provides documented procedures and best practices to help crews perform safe electric utility work.

## THE SOLUTION

Complying with industry standards begins with choosing the best-possible fabrics for a flame-resistant and arc-rated (FR/AR) clothing program. At Westex, our dedication to providing the most comfortable, most dependable FR/AR protection informs everything we do. That's why we rely on our proprietary technology—and rigorous lab testing specific to the arc flash hazard—to deliver a full range of market proven fabrics that meet the requirements of NESC®, OSHA 29 CFR 1910.269 and/or CAN/ULC-S801. Engineered to outperform other industry-leading textiles when it comes to protection, comfort and appearance, our arc-rated fabrics are worn by thousands of workers worldwide.





# THE FABRIC BRAND YOU CAN TRUST

The fabric used in FR/AR workwear is the largest factor in determining a garment's protection level, comfort and overall value. When developing a PPE program, look beyond compliance and ensure the fabric used in your clothing is manufactured by a credible supplier—and designed to protect against the hazards specific to your environment.

We go above and beyond to provide comfortable, reliable, real-world proven FR/AR fabrics. In addition to manufacturing the best fabrics, we're dedicated to educating the industry on hazards workers face and best practices to help ensure they're protected. Our dedication to the utility industry means more than providing protection. It means enhancing the lineman experience with FR/AR clothing.

**Choose arc-rated PPE manufactured with Westex brand fabrics—and backed by 150 years of Milliken innovation—for protection you can count on.**




Westex brand products are guaranteed flame resistant for the life of the garment.

# Electric Utility Product Portfolio

Using state-of-the-art equipment, advanced proprietary processes, various types of fibers, yarns and patented technologies, our team of engineers develops the most innovative FR/AR fabrics in the marketplace. Optimized for more than just maximum protection, our fabrics offer a range of features to ensure your crew is dry, comfortable and more likely to wear their PPE on the job.

## TABLE KEY

### Laundry Compatibility



-  Industrial Laundry
-  Lite Industrial Laundry
-  Home Laundry



## BLENDS



### POLARTEC® POWER DRY® FR

Offering superior next-to-skin moisture management, Polartec® Power Dry® FR uses a patented tri-blend knit to deliver mechanical wicking action and high breathability for fast drying times and ultra-comfortable performance.

Polartec® Power Dry® FR Fabrics										
STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NFPA 2112 CERTIFIED	EN ISO 11612:2015	IEC 61482-2	CUTTABLE WIDTH	SPEC WEIGHT oz/yd² (g/m²)	LAUNDRY	TYPICAL GARMENT APPLICATIONS
2009/2009HV	6.4 oz Pique Knit <b>CSA Z96 + ANSI 107</b>	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	A1, B1, C1	Class 1	54 in	6.4 (217)	 	Knit Shirts



### POLARTEC® POWER GRID™ FR

Utilizing Polartec's famous grid construction, Polartec® Power Grid™ FR is a jersey knit that provides superior warmth without weight, minimal bulk and the combined ability to both trap warm air and quickly release excess heat during high exertion.

Polartec® Power Grid™ FR Fabrics										
STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NFPA 2112 CERTIFIED	EN ISO 11612:2015	IEC 61482-2	CUTTABLE WIDTH	SPEC WEIGHT oz/yd² (g/m²)	LAUNDRY	TYPICAL GARMENT APPLICATIONS
2309/2309HV	9.6 oz Jersey Knit, Grid Velour <b>CSA Z96 + ANSI 107</b>	TENCEL™ Lyocell, Modacrylic, Aramid, Spandex	Cat 2	Yes	A1, B1, C2	Class 1	58 in	9.6 (325)	 	Lightweight Jackets, Balaclavas















### POLARTEC® WIND PRO® FR

A new standard in soft, weather-resistant FR fabric, Polartec® Wind Pro® FR is four times more wind resistant than classic fleece to reduce wind chill and repel moisture, while maintaining breathability and comfort.

Polartec® Wind Pro® FR Fabrics										
STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NFPA 2112 CERTIFIED	CUTTABLE WIDTH	SPEC WEIGHT oz/yd² (g/m²)	LAUNDRY	TYPICAL GARMENT APPLICATIONS		
2510/2510HV	11.6 oz Jersey/Velour <b>CSA Z96 + ANSI 107</b>	TENCEL™ Lyocell, Modacrylic, Aramid, Spandex	Cat 2	Yes	58 in	11.6 (393)	 	Jackets		





### WESTEX® DH

A popular choice for protection and performance, Westex® DH provides outstanding breathability and moisture management to keep the wearer cooler, drier and more comfortable. DH also retains an excellent after-wash appearance, with a low propensity for pilling.

Westex® DH Fabrics							
STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NFPA 2112 CERTIFIED	SPEC WEIGHT oz/yd² (g/m²)	LAUNDRY	TYPICAL GARMENT APPLICATIONS
6960	6.5 oz 2x1 Twill <b>ANSI 107</b>	TENCEL™ Lyocell, Modacrylic, Aramid, Anti-Static	Cat 2	Yes	6.5 (220)	 	Lightweight Shirts, Coveralls
6820	6.5 oz 2x1 Twill <b>CSA Z96 + ANSI 107</b>	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	6.5 (220)	 	Lightweight Shirts, Coveralls
8830	6.5 oz 2x1 Twill	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	6.5 (220)	 	Lightweight Shirts, Coveralls
6860	7.5 oz 2x1 Twill <b>CSA Z96 + ANSI 107</b>	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	7.5 (254)	 	Shirts, Pants, Coveralls, Jackets
8870	7.5 oz 2x1 Twill	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	7.5 (254)	 	Shirts, Pants, Coveralls, Jackets
6850/8860	7.5 oz Ripstop Twill <b>ANSI 107</b>	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	7.5 (254)	 	Pants, Coveralls, Jackets
8920	8.0 oz 2x2 Canvas	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	8.0 (271)	 	Pants, Coveralls, Jackets

### WESTEX® DH Air™

Westex® DH Air™ brings all the superior characteristics you've come to love from Westex® DH to a lightweight fabric. DH Air™ provides outstanding breathability and moisture management, while maintaining color consistency for the wearer.

Westex® DH Air™ Fabrics							
STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NFPA 2112 CERTIFIED	SPEC WEIGHT oz/yd² (g/m²)	LAUNDRY	TYPICAL GARMENT APPLICATIONS
8811	5.5 oz 2x1 Twill	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	5.5 (186)	 	Lightweight Shirts, Lightweight Coveralls
6940	5.7 oz 4x1 Sateen <b>CSA Z96 + ANSI 107</b>	<b>Patented Westex Tri-Blend</b> TENCEL™ Lyocell, Modacrylic, Aramid	Cat 2	Yes	5.7 (196)	 	Lightweight Shirts, Lightweight Coveralls

## COTTON AND COTTON RICH



Westex® UltraSoft® has a strong reputation for providing an excellent balance of protection, comfort and value. UltraSoft® was first introduced two decades ago and today is specified by name by thousands of end users globally.

### Westex® UltraSoft® Fabrics

STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NPFA 2112 CERTIFIED	SPEC WEIGHT oz/yd <sup>2</sup> (g/m <sup>2</sup> )	LAUNDRY	TYPICAL GARMENT APPLICATIONS
5568	6.5 oz 4x1 Twill <b>ANSI 107</b>	Cotton, High Tenacity Nylon	Cat 2	Yes	6.5 (220)		Shirts
0304	7.0 oz Stretch Twill	Cotton, High Tenacity Nylon, Polyester, Spandex	Cat 2	Yes	7.5 (254)		Shirts, Lightweight Coveralls
0301	7.0 oz 3x1 Twill	Cotton, High Tenacity Nylon	Cat 2	Yes	7.7 (260)		Shirts, Lightweight Coveralls
5572	7.7 oz 3x1 Twill High-Vis <b>ANSI 107</b>	Cotton, High Tenacity Nylon	Cat 2	Yes	7.7 (260)		Shirts, Lightweight Coveralls
0451	9.0 oz 3x1 Rugged Twill	Cotton, High Tenacity Nylon	Cat 2	Yes	9.7 (330)		Pants, Jackets, Coveralls, Bib Overalls
0851	10.0 oz Sateen	Cotton, High Tenacity Nylon	Cat 2	Yes	10.3 (350)		Pants, Arc Flash Suits (0851 over 0851 = 45 ATPV)
0181	10.5 oz Rib Knit	Cotton, High Tenacity Nylon, Spandex	Cat 2	Yes (trim)	11.0 (373)		Cuffs, Collars, Balaclavas
0180	11.0 oz Fleece	Cotton, High Tenacity Nylon	Cat 2	Yes	11.5 (390)		Sweatshirts, Hoodies
0961	11.0 oz Duck	Cotton, High Tenacity Nylon	Cat 2	Yes	11.0 (372)		Pants, Jackets, Bib Overalls



When comfort is the concern, Westex® UltraSoft AC® is the top choice. A higher construction and yarns finer than those in UltraSoft® are combined with our proprietary advanced softening technology to make the UltraSoft AC® the softest fabric on the market.

### Westex® UltraSoft AC® Fabrics

STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NPFA 2112 CERTIFIED	SPEC WEIGHT oz/yd <sup>2</sup> (g/m <sup>2</sup> )	LAUNDRY	TYPICAL GARMENT APPLICATIONS
0901	7.0 oz 3x1 Twill	Long-Staple Cotton, High Tenacity Nylon	Cat 2	Yes	7.5 (254)		Shirts, Lightweight Coveralls



Westex Indigo® is a superior line of FR denim fabrics that combines the look of everyday jeans wear with protective, comfortable and reliable industrial workwear.

### Westex Indigo® Fabrics

STYLE	DESCRIPTION	CONTENT	NFPA 70E PPE CATEGORY	NPFA 2112 CERTIFIED	SPEC WEIGHT oz/yd <sup>2</sup> (g/m <sup>2</sup> )	LAUNDRY	TYPICAL GARMENT APPLICATIONS
0395	10.5 oz 3x1 Twill Stretch Denim	Cotton, Polyester, Spandex	Cat 2	Yes	10.5 (356)		Jeans
0319	11.75 oz 2x1 Twill Denim	Cotton	Cat 2	Yes	12.4 (420)		Jeans
0320	11.75 oz 3x1 Twill Stretch Denim	Cotton, Polyester, Spandex	Cat 2	Yes	12.0 (406)		Jeans
0310	12.0 oz 3x1 Twill Denim Top Dye Sulfur	Cotton	Cat 2	Yes	12.0 (406)		Jeans
0312	12.5 oz 3x1 Twill Stretch Denim	Cotton, Spandex	Cat 2	Yes	12.5 (424)		Jeans
0329	13.0 oz 3x1 Twill Stretch Denim	Cotton, Polyester, REPREVE® Polyester, Spandex	Cat 2	Yes	13.0 (440)		Jeans
0308	14.0 oz 3x1 Twill Denim	Cotton	Cat 2	Yes	14.5 (492)		Jeans



# Overview of Standards

At Westex, we are committed to educating on workplace standards. This overview is not intended to replace those standards but rather serve as brief descriptions. We encourage you to view the full standards on the respective organization's website.

**NESC** [standards.ieee.org](https://standards.ieee.org)

## National Electrical Safety Code

Providing guidance on safely installing, operating and maintaining electric power and communication utility systems that supply residential, commercial and industrial buildings, this standard protects workers from arc flash exposure by requiring employers to perform a hazard risk analysis for employees that work on or near energized parts or equipment. If the incident energy is greater than 2 cal/cm<sup>2</sup>, AR PPE is required.

**ANSI/ISEA 107-2020** [ansi.org](https://ansi.org)

## American National Standard on performance, classification and selection of high-visibility safety apparel.

ANSI/ISEA 107-2020 specifies requirements for high visibility garments to help ensure workers in a range of industries are visible during the day, at night and in low-lighting. Additionally, to guide workers in choosing the proper PPE for their expected work settings and activities, this standard requires that garments are classified as type O (off-road), type R (roadway and temporary traffic control) or type P (public safety activities)—and if not FR, clearly labeled “This garment is not flame resistant as defined by ANSI/ISEA 107-2020 Section 10.5.”

**OSHA 29 CFR 1910.269** [osha.gov](https://osha.gov)

## Standard on selection, care, use and maintenance of arc-rated FR clothing.

This standard specifies that employers must ensure each worker exposed to hazards from electric arcs wears protective clothing and other necessary PPE with an arc rating greater than or equal to the heat energy estimate whenever that estimate exceeds 2.0 cal/cm<sup>2</sup>. Additionally, it requires employers to provide training to each employee mandated to wear PPE in proper care, maintenance, useful life and disposal of the PPE.

**CSA Z96-15** [csagroup.org](https://csagroup.org)

Specifying requirements for high visibility garments, CSA Standard Z96-15 helps improve the conspicuity of workers in a range of industries. This standard also guides workers in choosing the right apparel for their environments by classifying garments based on the body coverage—and thus visibility—they provide.

**CAN/ULC-S801-14** [scc.ca](https://scc.ca)

CAN/ULC-s801-14 applies to the construction, operation, maintenance and replacement of electric utility systems that are used to generate, transform, transmit, distribute or deliver electrical power or energy to consumer services or their equivalent, including: A Equipment located in easements, rights of way, or in other recognized agreements; B Equipment located on property owned or leased by the electric utility for the purpose of communication, metering and control of electrical power or energy; C Service drops or laterals, associated metering, and street lighting under the exclusive control of electric utilities; D Facilities used to generate electrical power or energy for electric utility systems; and E Voltage levels up to 800 kV a.c. line-to-line (L-L) and 600 kV d.c.

# Arc-Rated Clothing FAQs

## Can I use fabric softener, dryer sheets or in-wash scent boosters?

Do not use starches, fabric softeners or any other laundry additives. Synthetic, heavy-duty liquid laundry detergents are recommended for washing. These products do a superior job of removing soils and are less likely than soap to form sticky deposits of lime soap curds, which are difficult to rinse out.

## Can I use bleach?

In general, chlorine (sodium hypochlorite) bleach is prohibited from use with any FR/AR fabric. Bleaches containing hydrogen peroxide cannot be used with our flame-resistant and cotton blends. For further brand-specific care instructions, please see [Westex.com](https://Westex.com) for more detailed information.

## Can I use bug repellent with FR clothing?

The use of insect repellent should be limited to the skin and not sprayed on FR garments, as some insect repellents including DEET are highly flammable. DEET is not recommended for use on FR garments. Permethrin-based insect repellent has been shown in testing to have no adverse effect on flame resistance.

## On layered clothing systems, can the individual component arc ratings simply be added to obtain the system rating?

You cannot add the arc ratings of two individual fabrics together to receive the layered rating. In order to obtain a layered system arc rating, the fabrics must be arc tested as such. For more information on layered system arc ratings, see [Westex](https://Westex.com) multi-layered fabric ATPV data.

## Can I wash my non-FR clothing and FR PPE together?

FR garments should be sorted and washed separately to ensure that proper care is followed.

## What are the most popular layering systems created with Westex fabrics?

Those looking to combine two or more arc-rated garments for even greater protection often wear an UltraSoft® outer layer over either a DH, UltraSoft® or TrueComfort® inner layer when Cat 3 systems with arc ratings ranging from 26.8 to 35 ATPV are needed. A common cold weather Cat 4 system includes an UltraSoft® outer layer over an InsulAir® inner layer for arc ratings ranging from 50 to 55 ATPV. For test data on our fabrics, contact your Regional Market Manager or visit our website.

**For help customizing the PPE program that's  
right for you, contact one of our industry experts.**



**WESTEX.COM/CONTACT**

PLEASE NOTE: AS EACH CUSTOMER'S USE OF OUR PRODUCT MAY BE DIFFERENT, INFORMATION WE PROVIDE, INCLUDING WITHOUT LIMITATION, TEST RESULTS, RECOMMENDATIONS, SAMPLES, CARE/LABELING/PROCESSING INSTRUCTIONS OR MARKETING ADVICE, IS PROVIDED IN GOOD FAITH BUT WITHOUT WARRANTY AND WITHOUT ACCEPTING ANY RESPONSIBILITY/LIABILITY. ANY TEST RESULTS REPORTED ARE BASED ON STANDARD LABORATORY TESTING BUT SHOULD NOT BE USED TO PREDICT PERFORMANCE IN ACTUAL FIRE SITUATIONS. EACH CUSTOMER MUST TEST AND BE RESPONSIBLE FOR THEIR OWN SPECIFIC USE, FURTHER PROCESSING, LABELING, MARKETING, ETC. ALL SALES ARE EXCLUSIVELY SUBJECT TO OUR STANDARD TERMS OF SALE POSTED AT [milliken.com/terms](http://milliken.com/terms) (ALL ADDITIONAL/ DIFFERENT TERMS ARE REJECTED) UNLESS EXPLICITLY AGREED OTHERWISE IN A SIGNED WRITING. USE CAUTION NEAR SOURCES OF FLAME OR INTENSE HEAT, AND FOLLOW THE CARE INSTRUCTIONS - DO NOT LAUNDER WITH BLEACH OR FABRIC SOFTENERS. ANY FR LIFETIME GUARANTEES ARE SUBJECT TO THE LIMITATIONS AND CONDITIONS IN THE FORGOING TERMS OF SALE AND CARE INSTRUCTIONS. Westex , UltraSoft , UltraSoft AC , Indigo and DH Air are registered trademarks of Milliken & Company. National Electrical Safety Code® and NESC® are registered trademarks of the Institute of Electrical and Electronic Engineers. Copyright © 2023 Milliken & Co.