WESTEX®
A MILLIKEN BRAND

CARE, USE AND MAINTENANCE GUIDE

KNITS

WESTEX® TrueComfort®

WESTEX® UltraSoft®

Description of Fabrics

UltraSoft® and TrueComfort® knit and fleece fabrics are specially engineered to be flame-resistant secondary protective fabrics. Primary protective clothing (as described in ASTM F1002), like a firefighter's turnout gear, is worn for work activity "during which significant exposure to molten substance splash, radiant heat and flame is likely to occur." Secondary protective clothing, such as garments made from UltraSoft and TrueComfort fabrics, are "designed for continuous wear for work activities in designated locations in which intermittent exposure to molten substance splash, radiant heat and flame sources is possible."

The flame resistance of UltraSoft and TrueComfort fabrics is achieved by an engineering process proprietary to Westex. This finish has been designed to withstand the most rigorous laundering conditions anticipated for proper work clothing cleaning. A flame-resistant polymer is embedded in the fabric and will withstand the typical requirement for multiple launderings of such garments. **Westex guarantees the flame resistance of garments made from UltraSoft and TrueComfort knit fabrics for the useful life of those garments when employing proper care procedures.**

The thermal protective properties of any flame-resistant fabric can be compromised by contaminants on the fabric. Even though the original fabric is fully flame-resistant as measured by standard test protocols, flammable contaminants on garments can ignite and burn until consumed, which increases heat transfer to the wearer and leads to flame resistance failure. Garments must be laundered thoroughly to remove contaminants, and it is recommended to wash garments prior to wearing them.

Commercial Laundering

Industrial laundering is generally not recommended for garments constructed from UltraSoft and TrueComfort knit and fleece fabrics. However, there may be adequate conditions for industrial processing of UltraSoft and TrueComfort knit and fleece fabrics. Westex should be consulted by the processor and processor's chemical supplier(s) on a case-by-case basis.

Home Laundering

Garments constructed from UltraSoft and TrueComfort knit and fleece fabrics can be washed and dried by conventional home methods; no special technology is needed. These methods may not remove all potentially flammable soils that could adversely affect the performance of UltraSoft and TrueComfort knit and fleece fabrics. If home laundering does not remove contaminants or contaminant build-up, periodically dry-clean the garments. When UltraSoft and TrueComfort fabrics are contaminated by hazardous materials, use only commercial or on-site laundering with appropriate wastewater treatment techniques. The following procedures can help provide optimum cleaning and maintenance of protective apparel:

DETERGENTS AND OTHER LAUNDRY PRODUCTS

Washing Detergent Supplies

Many detergents are available for household use. Detergents that do not contain hydrogen peroxide or chlorine bleach (sodium hypochlorite) should be used. It is important to use a detergent and wash temperature that is sufficient to thoroughly clean soiled clothing.

Other Laundry Products

Laundry products, such as fabric softeners and starches, present a complex home-wash situation for all flame-resistant garments. Since it is impossible to examine and control each product and procedure, we do not recommend using them.

Use of Softened Water

For best cleaning results and the preservation of protective characteristics, an adequate supply of soft water is recommended for laundering garments constructed from UltraSoft and TrueComfort knit or fleece fabrics. Hard water contains salts, such as calcium and magnesium, that combine with other salts and fatty-based soaps to form insoluble deposits, film, scum and crud in the wash process that can deposit on the fabric. These contaminants are difficult to rinse from the fabric and may cover the flame resistance. Using soft water reduces detergent consumption, improves the quality of washing and avoids adverse effects on flame resistance.

DETERGENTS AND SUPPLEMENTAL CHEMICALS TO AVOID

Chlorine Bleach

Chlorine bleach (sodium hypochlorite), either separately or in detergents, must not be used on garments made of UltraSoft and TrueComfort knit or fleece fabrics as it can adversely affect the flame resistance of the fabric. Various laundry advisories generally prohibit the use of chlorine bleach for protective fabrics of any fiber composition.

Hydrogen Peroxide Bleach

Hydrogen peroxide (an oxygen bleach) must not be used separately or in detergents on garments constructed of UltraSoft and TrueComfort knit or fleece fabrics. The presence of metals with hydrogen peroxide can adversely affect the flame resistance of the fabric.

Soap

Using soaps (salts of fatty acids) is not recommended for laundering garments made with UltraSoft and TrueComfort knit or fleece fabrics. Soaps can form insoluble scums with hard water deposits on the fabric. Soap scums may be flammable and can adversely affect the thermal protection performance of the garment if they burn.

RECOMMENDED WASHING/DRYING PROCEDURES

It is recommended that garments constructed from UltraSoft and TrueComfort knit and fleece fabrics be washed and dried inside out. This will minimize surface abrasion and aid in maintaining the surface appearance of the garments.

Sorting

Garments made with UltraSoft and TrueComfort knit and fleece fabrics should be sorted by color—light colors washed with light colors and dark with dark—to avoid dye transfer. UltraSoft and TrueComfort knit and fleece fabrics should be washed with other UltraSoft and TrueComfort knit and fleece fabrics.

Pre-Treating

Stains, as well as deep soil lines on the collars and cuffs of garments, are more readily removed if pre-treated. Stains should be pre-treated at the earliest opportunity and allow sufficient time for the pre-treatment material to penetrate and loosen the soil. The heavily soiled or stained areas should be rubbed with a full-strength, heavy-duty liquid detergent or any off-the-shelf laundry pre-treatment product. Such pre-treatment products should not contain bleach or hydrogen peroxide, either separately or in combination with detergent.

Load Size

When laundering garments constructed from UltraSoft and TrueComfort knit or fleece fabrics, do not overload the machine. To ensure a cleaner wash and avoid setting wash wrinkles, the load size must permit clothes to move freely through the wash water and rinse cycle. Bulk (not weight) should be the limiting factor, regardless of the machine's rated capacity in pounds.

Wash Temperature

Heavily soiled garments made with UltraSoft and TrueComfort knit and fleece fabrics should be washed using the "warm" water temperature setting. Garments with lesser degrees of soil can be laundered with lower water temperatures, which will help retain garment color.

Tumble Drying

Garments made with UltraSoft and TrueComfort knit and fleece fabrics can be tumble-dried or air-dried after washing. For tumble drying, drying time should be carefully controlled so that garments are removed from the dryer immediately when dry or when slightly damp. Overdrying will result in excessive shrinkage. Hang damp garments to complete the drying process. Drying times will vary depending on the load size and the relative weight of the garments being dried. Use of the "Knit" or "Gentle" setting on the dryer provides a beneficial cool down cycle.

Ironing

Garments constructed of UltraSoft and TrueComfort knit and fleece fabrics may require pressing. A steam or dry iron may be used on the cotton blend setting. Ironing has no adverse effect on flame resistance properties of UltraSoft and TrueComfort knit and fleece fabrics. UltraSoft and TrueComfort knit and fleece fabrics may be dry-cleaned.

Dry Cleaning

Dry clean garments constructed from UltraSoft and TrueComfort fabrics for effective removal of greases and oils that are not easily removed by home or commercial laundering. Dry cleaning will not adversely affect the flame resistance of UltraSoft and TrueComfort fabrics. Care should be taken to maintain the solvent in a clean condition to avoid soil redeposition. Thorough removal of all traces of dry cleaning solvent from garments is recommended. Dry cleaning may not be as effective as wet washing in removing body soils and odors, so after five dry cleanings, a water wash is recommended to offset the issue.

Garment Maintenance

To perform its protective function, a garment must be maintained in its original condition. Rips, tears, cuffing and thin spots are normal consequences of use, and they should be repaired or restored as soon as possible utilizing like materials and thread. For advice on proper repair techniques, contact your uniform service provider or clothing manufacturer.

To obtain additional, useful information on the care and maintenance of flame-resistant garments, consult the following industry publications:

ASTM F1449	Standard Guide for Industrial Laundering Care and Maintenance of Flame Resistant or Arc Rated Clothing
ASTM F2757	Standard Guide for Home Laundering Care and Maintenance of Flame Resistant or Arc Rated Clothing
NFPA 2113	Standard on Selection, Care, Use and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire

Situations to Avoid in the Use of Clothing Made of UltraSoft and TrueComfort Fabrics

DO NOT USE FOR PRIMARY PROTECTIVE CLOTHING

Garments made from UltraSoft and TrueComfort fabrics should not be used for primary protective clothing, such as a firefighter's turnout gear. They should only be used for secondary protective clothing as recommended by ASTM F1002.

DO NOT USE FOR PRIMARY CHEMICAL SPLASH PROTECTION

UltraSoft and TrueComfort flame-resistant knit and fleece fabrics are designed for use in secondary protective clothing. The fabric is engineered to be flame-resistant, where it will self-extinguish when the source of ignition is removed. These fabrics are not designed to offer chemical splash protection. Other personal protective equipment, such as impermeable products, should be used in situations requiring chemical splash protection.

DO NOT USE IN THE PRESENCE OF STRONG ACIDS, OXIDIZERS OR REDUCERS

The flame-resistant polymer contained in UltraSoft and TrueComfort knit and fleece fabrics is highly resistant to most acids, bases and solvents. Exposure to strong acids, such as hydrochloric or sulfuric acid, may degrade the strength of the cotton fiber and cause holes in the fabric. Additionally, these fabrics should not be exposed to strong oxidizers, such as bleach (more than 6% sodium hypochlorite) and hydrogen peroxide, and strong reducers, such as sodium hydrosulfite. Strong oxidizing and reducing agents can cause an adverse reaction with the flame-resistant polymer.

WESTEX®
A MILLIKEN BRAND