



CARE AND MAINTENANCE OF ROUGHRIDER FR™ GARMENTS

Roughrider FR™ workwear recommend Direct purchase or Rental/Cleaning program thru your favorite uniforms laundry service provider for precise maintenance and care of your Roughrider FR™ Durable Uniforms and Work Clothes made of Westex FR fabric, in compliance hassle free. Or thru your favorite work clothes and uniforms provider by following carefully our (HMC) home maintenance and care of your Roughrider FR™ Durable Uniforms and Work Clothes made of Westex FR fabric, in compliance hassle free.

Garment will expand on the first, second and third wash, to return at it's original structure. Garment will shrink 3 to 5% after more washing and drying. Roughrider FR™ Guaranteed Flame Resistance for the life of the Garment when washed according to care instructions.

Flame resistant particularity will not wash away if Care and Maintenance is done correctly

Wash and Care Recommendations for Westex Flame Resistant Garments

 Westex
UltraSoft® AC®
88% Pima Cotton/
12% High Tenacity Nylon

 Westex
UltraSoft®
88% Cotton/
12% High Tenacity Nylon

 Westex
Indura®
100% Cotton

 Westex
Indigo™
100% Cotton

COMMERCIAL LAUNDERING

UltraSoft®, UltraSoft AC® and Indura® garments have been designed to withstand the most rigorous industrial laundering conditions anticipated for proper cleaning of work clothing. Westex guarantees the flame resistance of fabrics for the useful life of such garments when proper care procedures are employed. It is important to recognize that the thermal protective properties of any flame resistant fabric can be compromised by the presence of contaminants in the fabric from which the garment is made. Even though the original fabric is fully flame resistant as measured by standard test protocols, flammable contaminants on the garments can ignite, and will burn until consumed and there by increase heat transfer to the wearer and lead to flame resistance failure.

Washing Procedures General Formula

The formula in Appendix I (p.48) provides complete operational steps for commercially laundering Westex garments. The actual conditions used should be selected from this formula based on the degree of soiling and other factors to be considered for the garments being processed. For lightly soiled garments, not all steps need to be used. To improve soil removal and minimize redeposition, a "multi add" procedure is recommended. Consult your chemical supplier for assistance with quantity of supplies and conditions to be used for your specific case.

Loading Washer

Westex garments can be washed in a variety of wash formulations depending on the degree and type of soil. Care should be exercised in mixing light and dark colors as well as heavy and soiled items. Normal washer loads are generally set at 80% of washer capacity for 100% cotton garments, however, loading at 65% will provide better cleaning for heavily soiled items.

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Wash Temperature

The range of wash temperature suggested take into account various degrees of soiling. The higher the temperatures, the better the cleaning for heavily soiled garments. However, compatibility of wash temperature with the detergent used should be considered.

Colorfastness of Garments

Wash temperatures higher than 165°F (74°C) may affect the washfastness (color loss) of certain colors. Likewise, the presence of sodium perborate in the wash system will significantly affect the shade of certain naphthol dyes.

Rinsing

As for all washed garments, Westex garments must be adequately rinsed to remove wash chemicals and to lower the pH to that of the water supply. To minimize washer-induced wrinkles, water temperature is reduced in each succeeding rinse cycle until the last operation (sour) where it should be 100°F (38°C) or lower.

Sour

When laundering Westex garments, the use of a sour operation after thorough rinsing is strongly recommended. Sour is used to reduce fabric's pH from the alkaline detergents used for cleaning for the benefit of reducing the possibility of dermatological reactions from pH. No adverse effect on flame resistance results from the use of acid sour. Residual alkalinity in any garment can cause skin irritation and other problems. To ensure that all traces of wash chemical alkalinity are neutralized, sour can be added to the final rinse cycle in the wash wheel. Garments should not be rinsed further after the sour is added. Any standard or buffered sour is acceptable for use with Westex garments.

Tumble Dry Conditioning/Finishing

In many instances, tumble dry conditioning is the only finishing necessary for Westex garments. Tumble dry conditioning can be done prior to wet-on-dry tunnel finishing or pressing. For best results, tumble driers should not be overloaded. Garments should be dried efficiently at stack temperatures between 140°F (60°C) and 165°F (74°C). Garment temperature measured in the basket should not exceed 280°F (138°C). Do not overdry garments or excessive shrinkage will occur. If possible, remove garments from dryer when slightly damp (about 10% moisture) and hang to dry or tunnel process. Garments should not remain in a hot tumbler when not in motion.

Wet-to-Wet Type Tunnel Drying/Finishing

Wet garments from the wash wheel or partially dry tumble dried garments can be finished by hanging on hanger, and passing through a tunnel containing forced air supplied at 300°F (149°C) dry bulb and 190°F (80°C) wet bulb at a rate just sufficient to completely dry the garments. Garment temperature should not exceed 280°F (138°C). Again, do not overdry.



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Dry-to-Dry Type Tunnel Drying/Finishing

This process is not recommended for Westex garments. Should the operational flow of your plant require passage through the tunnel, we recommend using the wet-to-dry procedure or passing fully tumble dried garments through the tunnel at an ambient air temperature.

Pressing

If pressing is required, the conditions employed for pressing all-cotton fabrics are acceptable for Westex garments.

APPENDIX I

OPERATION	WATER LEVEL	WATER TEMP	TIME (MIN)	SUPPLIES**
Flush	High	140–165°F (60–75°C)	3	
Break***	Low	140–165°F (60–75°C)	10-20	2.5–3 lbs (1.1–1.4kg) Detergent****
Carry over	Low	140–165°F (60–75°C)	3-5	
Suds	Low	140–165°F (60–75°C)	5-7	1.25–1.5 lbs (0.5– 0.7kg) Detergent****
Rinse	High	140–165°F (60–75°C)	2	
Rinse	High	135°F (57°C)	2	
Rinse	High	120°F (49°C)	2	
Rinse	High	105°F (41°C)	2	
Sour Ammonium	Low	100°F (38°C)	5	1–4 oz Silicofluoride or Sodium Silicofluoride

* Load size 65%–80% of capacity

** Consult chemical suppliers for acceptable supplies for flame resistant garments.
Supply quantities stated for 100 lb (45 kg) of garments.

*** Best results are obtained with softener water. When softened water is not available, we recommend against the use of silicate supplemented detergents.

****Where possible, the use of a detergent with a phosphate builder has proved beneficial for laundering flameresistant fabrics.

Wash and Care Recommendations for Westex Flame Resistant Garments

HOME LAUNDERING

Westex garments can be washed and dried by any conventional home method, followed by hand ironing if necessary. No special technology is needed for home laundering. However, home procedures may not remove the last traces of very heavy, widespread or ground-in soils, which may be flammable and could adversely affect the performance of Westex garments. If home laundering does not remove contaminants or contaminant build-up, garments can be periodically dry cleaned or commercially laundered. When garments are contaminated by hazardous materials, only commercial or on-site laundering should be used with the appropriate wastewater treatment techniques. The following procedures can help provide optimum cleaning and maintenance of protective apparel:

Generalized Wash Procedure for Westex garments

- Do not overload washer, use high water level.
- Wash at temperature necessary to clean garment. (maximum 165°F or 74°C)
- Use recommended amount of quality detergent. (phosphate can be used)
- **DO NOT USE** softeners or starch. Since it is impossible to examine and control each product and procedure that might be used, we recommend that such products not be used.
- Best cleaning is obtained with soft water. Using soft water reduces detergent consumption, improves the quality of washing and avoids adverse effects on flame retardancy. When softened water is not available, we recommend against the use of silicate supplemented detergents.
- For optimum performance, wash garments inside out.

Washing Detergent Supplies

Westex garments can be washed with a wide variety of detergents available in supermarket and other stores for household use.

DO NOT USE These Products

TIDE WITH BLEACH (LIQUID) - CHLOROX II (LIQUID) - VIVID (LIQUID)

These products contain either chlorine bleach or hydrogen peroxide. This list is not a complete list of all products containing either chlorine bleach or hydrogen peroxide. Therefore, it is important to check the ingredients of all products before using with Westex garments.

Tumble Drying

Westex garments can be tumble dried or air dried following washing. For tumble-drying, removed garments immediately when dry or when slightly damp. Complete drying on a hanger. Overdrying will result in excessive shrinkage. Use of the "Permanent Press" setting on the dryer provides a beneficial cool down cycle.

Ironing

Westex garments may be pressed to remove wrinkles. Use cotton blend setting. Ironing has no adverse effect on flame resistance properties of Westex garments.



This could save your life!



Wash and Care Recommendations for Westex Flame Resistant Garments

DRY CLEANING

Dry cleaning Westex garments is recommended 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 Westex garments. Care should be taken to maintain the solvent in a clean condition to avoid redeposition. Thorough removal of all traces of dry cleaning solvent from garments is recommended. Dry cleaning is not recommended for denim garments because it can result in color loss. For removing body soils and odors, dry cleaning may not be as effective as washing. After five dry cleanings, a water wash is recommended to offset this problem.

MAINTENANCE

In order to perform its protective function, a garment must be maintained in its original condition. Rips, tears and abrasion to the fabric are normal consequences of use and they should be repaired as soon as possible. For advice on proper repair techniques, contact your uniform service provider or clothing manufacturer.

Wash and Care Recommendations for VINEX[®] Flame Resistant Garments



Westex Vinex[®]

85% Vinal (inherently flame resistant vinyl)
15% Polynosic Rayon

VINEX[®] FR-9B[®] fabrics are inherently flame-resistant fabrics particularly well suited for protective clothing for the aluminum industry because of their ability to shed molten aluminum splash. The polyvinyl alcohol polymer fiber is treated during the fiber forming process to make it flame resistant. The flame resistance thus is an inherent part of the PVA fiber component and cannot be removed by washing. It is then blended with polynosic fiber to produce a fabric that is 85% PVA and 15% polynosic.

VINEX[®] FR-9B[®] fabrics are highly resistant to a wide variety of most common acids, bases, and organic solvents (with the exception of concentrated nitric acid), with no observed loss of strength in the fabric. These garments do not offer personal protection from chemicals. Vinex[®] is not thermo-plastic in nature, and does not melt.

These garments primarily serve a protective function with overall appearance resulting from fabric performance characteristics. Water washing leaves the fabric fuzzy, accelerates color loss, and increases softness of hand. Dry cleaning offers the best combination of color retention and fabric body.

Tunnel finishing will result in noticeable hanger impressions and is not recommended. Pressing will result in noticeable shine to the fabric surface and slight color change. For optimal appearance, hang garments immediately from the dryer after proper cool down. The best way to determine performance in your operation is by processing a sample garment.



Wash and Care Recommendations for VINEX® Flame Resistant Garments

The information in this bulletin is based on the results of testing in our laboratory and information from the fabric vendor. It is provided for your knowledge and guidance. While it represents up-to-date knowledge regarding care and maintenance of the VINEX® garment, no warranty is expressed or implied.

Drying and finishing temperatures are critical to shrinkage performance. The use of chlorine bleach will result in discoloration of the shade. One of the following processing recommendations should be used to maximize performance and wear life:

COMMERCIAL LAUNDERING

- Launder using standard detergents with water temperature not exceeding 140°F.
- For conditioning,
do not exceed stack temperatures of 165°F and fabric temperatures of 260-270°F.
- If the garment is pressed, fabric temperature should not exceed 260-270°F to avoid thermal shrinkage. It is important that the garment be completely dried before pressing. Do not use steam in pressing.
- Allow for 3-5% shrinkage in sleeves and backlength on shirts and inseams on pants.

HOME LAUNDERING

- Wash in hot water at up to 140°F.
- Tumble dry on the "permanent press" dryer cycle. Remove immediately from the dryer when dry, and hang.
- If the garment is pressed, iron only completely dry fabric at up to the "blend" setting. Do not use steam when ironing!
- Wash once before wearing allowing for 3% shrinkage, or approximately 1" in inseam dimensions on pants and in sleeve and backlength on shirts.

DRY CLEANING

- Dry cleaning solvents can be used in commercial dry cleaning, and no special precautions are required.
- Rewetting agents may be used to improve garment comfort.
- Shrinkage in dry cleaned garments will be significantly less than laundered garments.



Wash and Care Recommendations for Westex by Milliken® CXP® Nomex® Garments



Westex by Milliken® CXP® Nomex®
100% Nomex® IIIA

COMMERCIAL LAUNDERING

- Process separately from other types of garments throughout the entire operation to prevent accumulation of lint and minimize pilling.
- Sort by shade to reduce staining or color transfer which may occur.
- Use low temperature (140°F max.), low alkalinity surfactant chemistry for water washing. Higher pH products and elevated wash temperatures accelerate color loss.
- Washing at hotter temperatures and higher levels of alkalinity may be necessary to remove soils. This will not damage the fabric or degrade the FR properties but may affect color. Removing flammable soils is more important than color retention.
- Use a multiple add procedure (break and second suds) where soil level requires.
- Do not use chlorine bleach. This will weaken the fabric and accelerate color loss. Use of oxygen bleach is acceptable where necessary.
- Temperature step-downs between baths should not exceed 15°F and cool to 100°F or less before extraction to minimize wrinkling.
- Rinse well and sour properly.
- As this fabric does not retain much moisture, short extraction at low levels should be sufficient. This should also reduce wrinkling.
- Condition at 140°-160°F stack temperature so fabric temperature measured in the basket does not exceed 280°F. This fabric will dry rapidly. Do not over dry. Excessive heat will cause color loss. Cool down to 100°F or less and remove promptly from the dryer.
- Shrinkage similar to 65/35 blends can be expected. The fabric will not stretch so allow for ease of motion in fitting wearers.
- Tunnel finishing will improve fabric smoothness but may cause hanger impressions. If creases in pants are desired, pressing will be required. Do not exceed 280°F fabric temperature.

HOME LAUNDERING

- Wash and dry separately to prevent accumulation of lint.
- Pre-treat greasy stains and do not overload the washer to help insure removal of soils.
- Wash in hot water (up to 140°F) using any typical home laundry detergent. Do not use tal low soap.
- **Do not use chlorine bleach. Do not use starch. Do not use fabric softeners.**
- Do not over dry.
- For maximum flame resistance, greases and oils must be thoroughly removed. If home procedures do not accomplish this, commercial laundering or dry cleaning is recommended.

DRY CLEANING

Either perchloroethylene or petroleum solvent can be used. In cases of heavy, oily soil, this may be the preferred approach. With petroleum, it is necessary to ensure all solvent has been completely dried from the garment.

REPAIR AND MENDING

Minor repairs that do not affect the integrity of the garment should be made with like materials by sewing on patches or darning small holes.

This could save your life!