



# Care & Cleaning Information for Nomex IIIA® and Nomex® Blend Flame Resistant Garments

NOMEX® fiber is heat resistant and permanently flame resistant. NOMEX IIIA® incorporates an anti-static fiber which reduces nuisance static. In static-sensitive environments, proper grounding procedures must be observed.

Flame resistant garments should be removed immediately and replaced with clean FR apparel if they become fouled with flammable material.

Flame resistant apparel should be washed using soft water (less than 4.0 grains). Hard water adversely affects cleaning, resulting in increased detergent usage. Hard water contains mineral salts that can form insoluble deposits on the surface of fabrics. Sufficient buildup can negate the flame resistant characteristics of the garment, and may serve as fuel if garments are exposed to an ignition source.

Nomex® garments can be laundered at temperatures up to 140°F with good colorfastness. Processing in hotter formulas may be required to remove soils. It should be noted that even under the best laundering conditions, color retention is generally not as good as industrial polyester/cotton blends. These garments can also be dry cleaned in perchloroethylene or petroleum solvent with no adverse affect on the flame resistant properties.

Important considerations are temperature control in washing and drying and removing flammable soils or chemicals that can overwhelm or mask the FR properties.

## INDUSTRIAL LAUNDRY

- 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 WASH

- 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 tallow **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.

*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 guidance and knowledge. As of the publication date, this bulletin contains up to date information on care and cleaning. Please visit our website at [www.bulwark.com](http://www.bulwark.com) for the latest information.*