

## Guidelines To Maximize The Life Of Your Protective Clothing

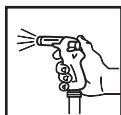
Protective clothing with outer shell fabrics made from PBI/aramid fibers provides excellent protection for fire service personnel. These garments will remain service worthy for many years if they are properly cleaned and maintained. The following guidelines from NFPA 1851 will help you to maximize the life of your protective clothing.



### Cleaning Frequency

Organizations such as NFPA, SAFER, FEMSA, FIERO and others recommend you clean your protective garments at least every

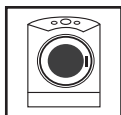
six months. Garments should also be cleaned after incidents where the garment has been soiled or exposed to blood, body fluids, tars, fuels, resins, paints, acids, by-products of combustion or other hazardous materials.



### At The Scene

When possible, flush your protective equipment with water at the fire scene after emergency operations are completed to remove

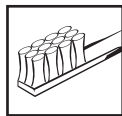
contaminants and prevent spreading contaminants beyond the fire scene. This procedure alone will not be sufficient to remove all contaminants.



### Preparing To Wash Your Garment

Protective garments should be cleaned separately from other garments. If liners are detachable, remove them from the outer shell and

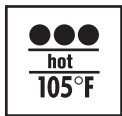
always launder separately to prevent any contaminants from the shell being transferred to the liner system during laundering. All closures should be fastened: velcro hook covering pile, hooks and dees fastened, zippers zipped and snaps closed. Turn the garment inside out and when possible, use a laundry bag to protect both the garment and the inside of the washing machine. When machine cleaning, it is suggested that a front load machine is used rather than a top load machine. Front load machines provide better mechanical action and are designed for heavy loads of bulky items while top load machines are designed for multiple garments at minimum bulk, similar to the types used in homes. The agitators in top load machines have the potential to reduce the longevity of garments due to mechanical damage.



### Spot Cleaning and Pretreating

A mild liquid detergent or a mild pre-cleaner can be used directly on soiled areas. Treat the soiled area(s) as recommended by the

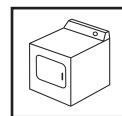
manufacturer and rub the fabric together. Some household detergents that may be used are mentioned below. A soft bristle brush, such as a toothbrush, may be used to gently scrub deeply soiled areas. For stubborn stains such as tar, oil, or grease, solvents such as Varsol or Mineral Spirits may be used. Avoid using solvents on leather and reflective trim. Garments must be laundered after using these and other solvents to remove residual deposits in the outer shell material.



### Washing (Routine cleaning consistent with NFPA 1851)

PBI/aramid outer shells are made from inherent heat and flame resistant fibers and these properties

cannot be washed out. Set the washer on a normal wash cycle and wash garment in warm to hot water at temperatures no higher than 105°F (40°C). Liquid detergents make the best cleansers because they are formulated to contain special agents that help prevent re-deposits of soil during the washing process. Cleaning solutions shall have a pH range between 6.0 pH and 10.5 pH. Some household products that may be used for normal laundering, spot treating, and pretreating are Liquid Cheer, Liquid Fab, Liquid Tide, Liquid Wisk, and Shout. Do not use Chlorine bleach as it will significantly degrade your outer shell. The use of oxygenated bleaches such as liquid Clorox II and Liquid Vivid is acceptable and may be used.



### Drying

The best way to dry your garment is by air drying it in a shaded area with good cross ventilation. Do not hang your garment in direct sunlight as prolonged exposures will significantly degrade any outer shell material. Tumble drying at a low or cool temperature setting will also give satisfactory results. If heat must be used, basket temperatures must not exceed 105°F (40°C) and remove the garment before it is completely dry. High temperatures may result in excess shrinkage.



### Dry Cleaning

The protective qualities of your garment will not be adversely affected by dry cleaning, however

the process may adversely affect the trim on your garment and therefore dry cleaning is not recommended.



### Care and Storage

All outer shell fabrics are adversely affected by sunlight. Exposure to Ultraviolet (UV) light severely degrades all outer shell materials.

Do not store your turnout gear in direct sunlight and long term storage under fluorescent light is also not recommended. This includes hanging your gear in your vehicle, or on station hooks that receive sunshine through windows. Your gear must be protected either by storing it in a locker or gear bag, or even by covering it with a dark cloth.



### Retirement and/or Repair

Change in color alone does not mean an outer shell is no longer strong enough to do the job it was intended to do. Change in color

can occur from many things including excessive light, thermal, and chemical exposure. Retirement of the outer shell should occur when the fabric is contaminated to the point it cannot be treated or when it is no longer strong enough to resist rips and tears. To determine if the outer shell is too weak to repair, grab the fabric with both hands and pull the fabric apart. If the fabric is easily torn while trying to pull it apart (minimal effort <5 lbs. of strength), it is time to repair the weakened area of the outer shell. If the entire outer shell rips easily, the entire outer shell should be retired.