NFPA Standards for Wildland Firefighting – Quick Tips



The National Fire Protection Association (NFPA) standard on clothing and protective equipment targets protecting firefighters from heat stress, the primary cause of wildland firefighter injuries, in wildland firefighting operations.

This standard encompasses the clothing and protective apparel worn during normal exposure limits, and an emergency fire shelter for severe exposure limits, where death or serious injuries can occur.

The NFPA standard states the minimum design, performance, testing and certification requirements for protective clothing, helmets, gloves, footwear and face/neck shrouds that are designed to protect firefighters during a wildland firefighting operation.

All equipment that is used for wildland firefighting must be labeled as such and contain all pertinent information regarding that product. This label must be attached to each article of personal protective equipment:

“THIS WILDLAND FIREFIGHTING PROTECTIVE (GARMENT, HELMET, GLOVE, or FOOTWEAR) MEETS THE (GARMENT, HELMET, GLOVE, FOOTWEAR, or FACE/NECK SHROUD) REQUIREMENTS OF NFPA 1977, STANDARD ON PROTECTIVE CLOTHING AND EQUIPMENT FOR WILDLAND FIREFIGHTING, 1998 EDITION.”

In addition, the manufacturer must provide the following information to be written on the label:

- Manufacturer’s name, identification or designation
- Manufacturers address
- Country where manufactured
- Manufacturer’s identification number, lot number or serial number
- Month and year when manufactured (not coded)
- Model or style name, number or design
- Size or size range
- Garment materials and percent content or nominal weight of the helmet (this is only for garments and helmets);
- Cleaning precautions

- The statement “**DO NOT REMOVE THIS LABEL”**

The manufacturer must also provide the user with the following information:

- Pre-use information
- Preparation for use
- Inspection frequency and details
- Don/doff
- Proper use consistent with NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, and Title 29, Code of Federal Regulations, Part 1910.132, Personal Protective Equipment
- Maintenance and cleaning
- Retirement and disposal criteria and considerations.

For all of the above personal protective items, the appropriate sizing charts and conversion tables, where applicable, must be provided to the purchaser from the manufacturer upon request.

The NFPA standard also encompasses the design and labeling requirements of fire shelters and the associated carrying case. The labeling criteria described above for the other protective gear is also used on the fire shelters and the carrying case. One major difference is that the label on the fire shelter must be accessible without deploying the fire shelter. The manufacturer must provide the following information with a fire shelter:

- Pre-use information
- Recommended storage practices
- Inspection frequency and details
- Deployment of shelter
- Maintenance and cleaning
- Retirement and disposal

Several design requirements specific to each item also are stated in the NFPA standard. The type of thread, openings and the associated closures, statements relating to the collar and cuffs of a garment, all fasteners and zippers, and what part of the garment is allowed to touch the user are just some examples of the detail covered in the standard.

All of the PPE covered under the NFPA standard must pass a battery of tests. In order to be certified, the testing and certification of these items is completed by an independent testing agency. Any item, or part of that item, that does not meet the requirements will not be certified under this standard.

All PPE is subjected to preconditioning. This is set up so all of the equipment is at the same temperature and humidity level so that the NFPA standard can be applied equally to all manufacturers.

The garments and face/neck shroud are then put through the following tests:

- Radiant protective-performance test
- Flame-resistance test
- Heat- and thermal-shrinkage test
- Total heat loss test
- Tear-resistance test
- Cleaning shrinkage-resistance test

- Seam breakage strength test

And the helmet goes through the following tests:

- Electrical insulation test
- Top impact-resistance test
- Helmet physical-penetration resistance test
- Helmet flammability test
- Suspension-system retention test
- Retention system test
- Heat distortion test
- Goggle and headlamp clip attachment test

The gloves must pass the following tests:

- Glove heat-resistance test
- Glove flame-resistance test
- Conductive heat-resistance test
- Thermal protective performance test
- Dexterity test
- Grip test
- Glove fit test

Gloves and footwear are put through these tests:

- Cut-resistance test
- Puncture-resistance test

Source

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