

## OSHA Directives

### STD 1-9.3 - 1910.156(e)(3)(ii) Fire - Resistive Coat Requirements for Fire Brigades

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- **Record Type:** Instruction
  - **Directive Number:** STD 1-9.3
  - **Standard Number:** 1910.156(e)(3)(ii)
  - **Subject:** 1910.156(e)(3)(ii) Fire - Resistive Coat Requirements for Fire Brigades
  - **Information Date:** 12/12/1981
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OSHA Instruction STD 1-9.3 December 12, 1981 Office of Compliance Programming

Subject: 29 CFR 1910.156(e)(3)(ii) Fire-Resistive Coat Requirements For Fire Brigades

A. Purpose. This instruction recognizes a variation to the washing cycle requirements referenced in 29 CFR 1910.156 (e)(3)(ii).

B. Scope. This instruction applies OSHA-wide.

C. Action. OSHA Regional Administrators and Area Directors shall ensure that 29 CFR 1910.156(e)(3)(ii) is enforced as clarified in paragraph E. of this instruction.

D. Federal Program Change. This instruction describes a Federal program change which affects State Programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.
2. Explain the technical content of the change to the State designee as requested.
3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.
4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

E. Guidelines. Variations from the NFPA 1971 criteria pertaining to color fastness, shrinkage, and water absorption shall be noted as a de minimis violation only when fire-resistive coats are

washed according to manufacturers' instructions. This technical violation does not reduce the wearer's safety.

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F. Background. A provision of the OSHA fire brigade standard (1910.156(e)(3)(ii)) requires that the performance, construction, and testing of fire-resistive coats be at least equivalent to the requirements of the National Fire Protection Association (NFPA) standard NFPA 1971-1975, "Protective Clothing for Structural Fire Fighting" with certain permissible variations from those requirements.

1. Table 3-4.1.1 of NFPA 1971 specifies criteria for tearing-strength, color fastness, shrinkage, water absorption, and flame resistance. Paragraph 3-4.1.1 of NFPA 1971 specifies that these criteria are also applicable after five cycles of laundering and drying in accordance with American Association of Textile Chemists and Colorists (AATCC) Method 96-Test-IV-E.

2. The commercial laundering and drying cycle specified in AATCC Method 96-Test-IV-E involves mechanical agitation of the materials in a water environment exposure of 203 deg. F - 212 deg F. This is a severe test method which does not reflect actual washing of fire-resistive coats by fire fighters following manufacturers' instructions. The washing of fire-resistive coats by fire fighters when following manufacturers' instructions consists of spreading the garment out on the engine room floor (or other flat surface) and scrubbing the garment using warm water, mild detergent, and soft brush. This method of washing fire-resistive coats is preferred since it could enhance the longevity of the coats as compared to commercial laundering and drying.

3. When fire retardant (FR) cotton coats are washed according to AATCC Method 96-IV-E and the attributes of color fastness, shrinkage, and water absorption are evaluated, either no change would be expected, or the values vary by a small degree from those specified in NFPA 1971. These minor variations from the criteria specified in NFPA 1971 would not jeopardize the wearer's safety. However, if FR cotton coats are washed using manufacturers' instructions

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(which is the actual method of washing used by fire fighters), the protective integrity of the garments is maintained in accordance with the criteria specified in NFPA 1971.

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