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NFPA 1975 Station/Work Uniforms for Fire Fighters 1990 Edition

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The Board of Directors reaffirms that the National Fire Protection Association recognizes that the toxicity of the products of combustion is an important factor in the loss of life from fire. NFPA has dealt with that subject in its technical committee documents for many years.

There is a concern that the growing use of synthetic materials may produce more or additional toxic products of combustion in a fire environment. The Board has, therefore, asked all NFPA technical committees to review the documents for which they are responsible to be sure that the documents respond to this current concern. To assist the committees in meeting this request, the Board has appointed an advisory committee to provide specific guidance to the technical committees on questions relating to assessing the hazards of the products of combustion.

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NFPA 1975

Standard on

Station/Work Uniforms for Fire Fighters

1990 Edition

This edition of NFPA 1975, *Standard on Station/Work Uniforms for Fire Fighters*, was prepared by the Technical Committee on Fire Service Protective Clothing and Equipment and acted on by the National Fire Protection Association, Inc. at its Annual Meeting held May 21-24, 1990 in San Antonio, TX. It was issued by the Standards Council on July 20, 1990, with an effective date of August 17, 1990, and supersedes all previous editions.

The 1990 edition of this document has been approved by the American National Standards Institute.

Origin and Development of NFPA 1975

The Technical Committee on Protective Equipment for Fire Fighters began work on this standard in 1982 in answer to requests from the fire service to establish requirements for clothing, such as station uniforms or work uniforms, that are worn under protective clothing. The work was completed in the Spring of 1984 and submitted to the NFPA for official adoption. The first edition was issued in June 1985.

The Subcommittee on Station/Work Uniforms began work on the revision to NFPA 1975, 1985 Edition in 1988. The proposed revisions were presented to the Technical Committee in April, 1989, and then submitted to the Annual Meeting 1990 standards cycle. This second edition was acted on by the membership of the Association at the Annual Meeting in San Antonio, Texas and was issued with an effective date 17 August 1990.

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Contents

NFPA 1975

Standard on

Station/Work Uniforms for Fire Fighters

1990 Edition

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates explanatory material on that paragraph in Appendix A.

Information on referenced publications can be found in Chapter 5 and Appendix B.

Chapter 1 Administration

1-1 Scope.

1-1.1* This standard specifies minimum general requirements, minimum performance requirements, and test methods for textile and other materials used in the construction of station/work uniforms.

1-1.2 This standard applies to station/work uniforms that are not themselves protective garments, but are designed to be worn under protective clothing.

1-2 Purpose.

1-2.1* The purpose of this standard is to provide a fire fighter with a station/work uniform that, when worn under protective clothing, will not contribute to fire fighter injury and will not of itself cause any degradation of the performance features of the fire fighter protective clothing worn over it.

1-2.2 Controlled laboratory tests used to determine compliance with the performance requirements of this standard shall not be deemed as establishing performance levels for all situations to which fire fighting personnel may be exposed.

1-2.3* This standard is not intended to serve as a detailed manufacturing or purchase specification, but shall be permitted to be referenced in purchase specifications as minimum requirements.

1-3 Definitions.

Approved.* Acceptable to the "authority having jurisdiction."

Authority Having Jurisdiction.* The "authority having jurisdiction" is the organization, office or individual responsible for "approving" equipment, an installation or a procedure.

Certification/Certified. A system whereby a certification organization determines that a manufacturer has demonstrated the ability to produce a product that complies with the requirements of this standard, authorizes the manufacturer to use a label on listed products that comply with the requirements of this standard, and establishes a follow-up program conducted by the certification organization as a check on the methods the manufacturer uses to determine compliance with the requirements of this standard.

Certification Organization. An independent, third party organization that determines product compliance with the requirements of this standard with a labeling/listing/follow-up program.

Compliant. Meeting or exceeding all applicable requirements of this standard.

Components.* All materials used in the construction of station/work uniforms such as thread, trim, bindings, zippers, buttons, and labels but excluding textile fabrics, interlinings, and emblems.

Drip. To run or fall in drops or blobs.

Flame Resistance. The property of a material whereby combustion is prevented, terminated, or inhibited following application of a flaming or non-flaming source of ignition, with or without subsequent removal of the ignition source. Flame resistance can be an inherent property of the textile material, or it may be imparted by specific treatment.

Follow-Up Program. The sampling, inspections, test, or other measures conducted by the certification organization on a periodic basis to determine the continued compliance of labeled and listed products that are being produced by the manufacturer to the requirements of this standard.

Garment. Unit of textile apparel that covers the torso and limbs.

Garment Label. A label affixed to the garment by the manufacturer containing general information, warnings, care, maintenance, or similar data. This garment label is not a certification organization's label or identifying mark.

Inherent Flame Resistance. As applied to textiles, flame resistance that is derived from an essential characteristic of the fiber or polymer from which the textile is made.

Interlining. Any textile that is intended for incorporation into any article of wearing apparel as a layer between an outer shell and inner lining.

Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization acceptable to the "authority having jurisdiction" and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

Listed.* Equipment or materials included in a list published by an organization acceptable to the "authority having jurisdiction" and concerned with product evaluation, that maintains periodic inspection of production of listed equipment or materials and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.

Melt. To change from solid to liquid, or become consumed, by action of heat.

Separate. A material response evidenced by splitting or delaminating.

Shall. Indicates a mandatory requirement.

Should. This term, as used in the appendix, indicates a recommendation or that which is advised but not required.

Station/Work Uniforms. Garments worn under protective clothing, including but not limited to pants, shirts, jackets, or coveralls, but excluding underwear and socks.

Structural Fire Fighting. The activities of rescue, fire suppression, and property conservation in buildings, enclosed structures, vehicles, vessels, or like properties that are involved in a fire or emergency situation.

Textile Fabric. A planar structure consisting of yarns or fibers.

Chapter 2 Certification

2-1 General.

2-1.1 Station/work uniforms that are labeled and listed as being compliant with this standard shall meet or exceed all requirements specified in this standard and shall be certified.

2-1.2 All certifications shall be performed by an approved certification organization.

2-1.3 Compliant station/work uniforms shall be labeled and listed. Such station/work uniforms shall also have a garment label that meets the requirements specified in Section 2-4 of this Chapter.

2-2 Certification Program.

2-2.1* The certification organization shall not be owned or controlled by manufacturers or vendors of the product being certified. The certification organization shall be primarily engaged in certification work and shall not have a monetary interest in the product's ultimate profitability.

2-2.2 The certification organization shall refuse to certify products to this standard that do not comply with all applicable requirements of this standard.

2-2.3* The contractual provisions between the certification organization and the manufacturer shall specify that a listing is contingent on compliance with all applicable requirements of this standard. There shall be no conditional, temporary, or partial certifications. Manufacturers shall not be authorized to use any label or reference to the certification organization on products that are not manufactured in compliance with all applicable requirements of this standard.

2-2.4* For certification, laboratory facilities and equipment for conducting proper tests shall be available, a program for calibration of all instruments shall be in place and operating, and procedures shall be in use to ensure proper control of all testing. Good practice shall be followed regarding the use of laboratory manuals, form data sheets, documented calibration routines, performance verification, proficiency testing, and staff qualification and training programs.

2-2.5 Manufacturers shall be required to establish and maintain a program of production inspection and testing.

2-2.6 The manufacturer and the certification organization shall evaluate any changes affecting the form, fit, or function of the certified product to determine its continued certification to this standard.

2-2.7* Product certifications shall include a follow-up inspection program, with at least 2 random and unannounced visits per 12 month period.

2-2.8 The certification organization shall have a program for investigating field reports alleging malperformance or failure of listed products.

2-2.9 The operating procedures of the certification organization shall provide a mechanism for the manufacturer to appeal decisions. The procedures shall include the presentation of information from both sides of a controversy to a designated appeals panel.

2-2.10 The certification organization shall be in a position to use legal means to protect the integrity of its name and label. The name and label shall be registered and legally defended.

2-3 Inspection and Testing.

2-3.1 Sampling levels for testing and inspection shall be established by the certification organization and the manufacturer to assure a reasonable and acceptable reliability at a reasonable and acceptable confidence level that products certified to this standard are compliant. This information shall be provided to the purchaser on request.

2-3.2 Testing for determining material and component compliance with the requirements specified in Chapter 3 of this standard shall be performed on samples representative of materials and components used in construction of the garments. The certification organization shall be permitted to also use sample materials cut from a representative station/work uniform.

2-4 Garment Labeling.

2-4.1* Station/work uniforms shall have a garment label permanently and conspicuously attached to the inside of each garment upon which at least the following warning and information are printed in at least $^{1}/_{16}$ in. (1.5 mm) high letters:

"THIS STATION/WORK UNIFORM MEETS THE REQUIREMENTS OF NFPA 1975, *STANDARD ON STATION/WORK UNIFORMS FOR FIRE FIGHTERS*, 1990 EDITION.

WARNING

THIS GARMENT WORN AS A STATION/WORK UNIFORM ALONE DOES NOT PROVIDE PROTECTION FOR FIRE FIGHTING.

FOR ANY FIRE FIGHTING OPERATIONS, PROTECTIVE CLOTHING APPROPRIATE FOR THE TYPE OF FIRE FIGHTING OPERATION MUST BE WORN FOR LIMB/TORSO PROTECTION. FAILURE TO COMPLY WITH THIS WARNING MAY RESULT IN SERIOUS INJURY OR DEATH."

Manufacturer's name
Manufacturer's address
Manufacturer's number, cut/lot, or serial number
Country of manufacture
Country of origin of textile fabric
Style, name, or design
Date of manufacture
Size
Cleaning and drying instructions, including applicable warnings regarding detergents, soaps, cleaning additives, and bleaches
Fiber contents

"DO NOT REMOVE THIS LABEL"

2-4.2 All portions of the required garment label shall be printed at least in English.

2-5 User Information.

2-5.1* The manufacturer of station/work uniforms certified as being compliant with this standard shall provide care and cleaning instructions for the station/work uniforms to the purchaser.

2-5.2 The manufacturer shall provide to the purchaser upon request a statement regarding the textile materials resistance to deterioration by chemicals that may be specified by the purchaser.

Chapter 3 Performance Requirements

3-1 General.

3-1.1 Textile fabrics and interlinings shall be individually tested for flame resistance and shall have an average char length of not more than 6.0 in. (152.4 mm) and an average afterflame of not more than 2.0 seconds and shall not melt or drip when tested as specified in Section 4-2 of this standard.

3-1.2 Textile fabrics, interlinings, components, and any other material used in the construction of station/work uniforms shall be individually tested for heat resistance in their original form and shall not melt, drip, separate, or ignite when tested as specified in Section 4-3 of this standard.

3-1.3* All thread utilized in the construction of the station/work uniform shall not melt when tested as specified in Section 4-4 of this standard.

3-1.4 All garment labels shall be clearly legible to the eye both before and after testing as specified in Section 4-5 of this standard.

Chapter 4 Test Methods

4-1 Preconditioning.

4-1.1 Samples to be tested shall be conditioned in accordance with Section 4, "Atmospheric Conditions for Testing," of Federal Test Method Standard 191A, *Textile Test Methods*, at a temperature of 70°F, ± 2°F (21°C, ± 1°C) except at a relative humidity of 65 percent, ± 5 percent. Samples shall be tested not more than 5 minutes after removal from conditioning.

4-2 Flame Resistance Test.

4-2.1 Flame resistance shall be conducted in accordance with Method 5903, "Flame Resistance of Cloth; Vertical," of Federal Test Method Standard 191A, *Textile Test Methods*.

4-2.2 Samples to be tested shall be preconditioned as specified in Section 4-1 of this chapter, after either washing or drycleaning cycles specified in either 4-2.3 or 4-2.4 of this section.

4-2.3* For textile fabrics specified to be laundered, the flame resistance testing shall be conducted both before and after 50 cycles of washing and drying in accordance with the procedure specified in Machine Cycle 3, Wash Temperature IV, Drying Procedure A iii, of AATCC 135, *Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics*.

4-2.3.1* For textile fabrics that are sensitive to the high phosphate AATCC 124 detergent and so specified, a substitute test detergent shall be permitted to be used for the washings.

4-2.4 For textile fabrics specified to be drycleaned, the flame resistance testing shall be conducted both before and after 25 cycles of commercial drycleaning.

4-3 Heat Resistance Test.

4-3.1 Samples to be tested shall be preconditioned as specified in Section 4-1 of this chapter.

4-3.2 Specimen length shall be 6 in. (152.4 mm) other than for textiles utilized in the garment in lengths less than 6 in. (152.4 mm), where length shall be the same as utilized in garment. Specimen width shall be 6 in. (152.4 mm), other than for textiles utilized in the garment in widths less than 6 in. (152.4 mm), where the width shall be the same as utilized in garment. Specimens shall be suspended in the oven utilizing metal clips.

4-3.3 The forced circulating air oven shall achieve and maintain an air temperature of 500°F, + 10°/−0°F (260°C, +3°/−0°C) for a period of not less than 5 minutes. Oven recovery time after the door is closed shall not exceed 90 seconds.

4-3.4 The fabric specimen shall be suspended by metal clips at the top and centered in the oven so that the entire specimen is not less than 2 in. (50.8 mm) from any oven surface or other specimen, and airflow is parallel to the plane of the material.

4-3.5 Hardware and accessory material specimens shall be supported or freely suspended in the center of the ovens so that they are not less than 2 in. (50.8 mm) from any oven surface or other specimen and are exposed to circulating air.

4-3.6 Specimens, mounted as specified, shall be placed in the circulating air oven for 5 minutes, +0.15/−0.0 minutes. Specimen exposure time shall begin when oven has recovered to an air temperature of 500°F, +10°/−0°F (260°C, +3°/−0°C).

4-3.7 Results shall be reported as pass or fail.

4-4 Thread Heat Resistance Test.

4-4.1 Samples to be tested shall be preconditioned as specified in Section 4-1 of this Chapter.

4-4.2* Thread shall be tested to a temperature of 500°F (260°C) in accordance with Method 1534, "Melting Point of Synthetic Fibers," of Federal Test Method Standard 191A, *Textile Test Methods*.

4-5 Label Requirement.

4-5.1 Samples to be tested shall be preconditioned as specified in Section 4-1 of this chapter. Labels not meeting the specimen size requirements for the AATCC procedure shall be sewn to support fabric of a required size.

4-5.2 Labels for station/work uniforms that are to be laundered shall be subjected to 50 cycles of washing and drying in accordance with Machine Cycle 3, Wash Temperature IV, Drying Procedure A iii, of AATCC 135, *Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics*.

4-5.3 Labels for station/work uniforms that are specified to be drycleaned shall be subjected to 25 cycles of commercial drycleaning.

4-5.4 Labels shall be examined to determine pass/fail.

Chapter 5 Referenced Publications

5-1 The following documents or portions thereof are referenced within this standard and shall be considered part of the requirements of this document. The edition indicated for each reference is the current edition as of the date of the NFPA issuance of this document.

5-1.1* AATCC Publication.

Technical Manual of the American Association of Textile Chemists and Colorists, Volume 59; AATCC Method 135, *Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics*, 1987

5-1.2* GSA Publication.

Federal Test Method Standard 191A, *Textile Test Methods*, 1978.

Appendix A

This Appendix is not a part of the requirements of this NFPA document, but is included for information purposes only.

A-1-1.1 Textile fabric experience has shown that purchasers should consider fabrics meeting suggested additional specifications shown in Table A-1-1.1.

Table A-1-1.1

Material Property (Method)	Woven Trousers, Jackets	Woven Shirts	Knit Tee Shirts	Knit Sweat Shirts
Fabric Weight (oz/yd^2) (min) (ASTM D 3776)	5.5	4.0	3.0	7.0
Tensile Strength, Grab (lb), (min) (ASTM D 1682)	50	20	—	—
Tear Strength (lb), (min) (ASTM D 1424)	5.0	2.0	—	—
Burst (lb), (min) (ASTM D 3787)	—	—	35	50
Shrinkage (% max) *(AATCC 135, 3-IV-Aiii, 5 washes)	3.0%	3.0%	12.0%	12.0%
Colorfastness				
**Laundering (AATCC 61, 11, A)	3	3	3	3
Crocking (AATCC 8)	3	3	3	3
Light (AATCC 16E)	20 AFU: Step 3	20 AFU: Step 3	20 AFU: Step 3	20 AFU: Step 3

* For fabrics labeled "dryclean only" use AATCC 158, 5 drycleanings.

** For garments labeled "dryclean only" use AATCC Method 132.

A-1-2.1 Dress uniforms are not intended to be worn under fire fighters' protective clothing. However, if dress uniforms are worn under protective clothing, they should meet minimum performance criteria established in this standard.

A-1-2.3 The purchaser should provide the vendor with a detailed specification for the specific performance and design criteria. Also, the purchaser should establish criteria whereby new uniforms are inspected periodically for compliance.

A-1-3 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials nor does it approve or evaluate testing laboratories. In determining the acceptability of installations or procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling

practices of an organization concerned with product evaluations which is in a position to determine compliance with appropriate standards for the current production of listed items.

A-1-3 Authority Having Jurisdiction. The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner since jurisdictions and "approval" agencies vary as do their responsibilities. Where public safety is primary, the "authority having jurisdiction" may be a federal, state, local, or other regional department or individual such as a fire chief, fire marshal, chief of a fire prevention bureau, labor department, health department, building official, electrical inspector, or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the "authority having jurisdiction." In many circumstances the property owner or his designated agent assumes the role of the "authority having jurisdiction"; at government installations, the commanding officer or departmental official may be the "authority having jurisdiction."

A-1-3 Components. Emblems affixed to garments by a manufacturer are not components of construction. As such, users should be aware that unless these items have been designed to meet the same minimum requirements as other components specified in this standard, emblems might reduce performance properties of the garment and might contribute to injury.

A-1-3 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation, some of which do not recognize equipment as listed unless it is also labeled. The "authority having jurisdiction" should utilize the system employed by the listing organization to identify a listed product.

A-2-2.1 The certification organization should have sufficient breadth of interest and activity so that the loss or award of a specific business contract would not be a determining factor in the financial well-being of the agency.

A-2-2.3 The contractual provisions covering certification programs should contain clauses advising the manufacturer that if requirements change, the product should be brought into compliance with the new requirements by a stated effective date through a compliance review program involving all currently listed products.

Without these clauses, certifiers would not be able to move quickly to protect their name, marks, or reputation. A product safety certification program would be deficient without these contractual provisions and the administrative means to back them up.

A-2-2.4 Investigative procedures are important elements of an effective and meaningful product safety certification program. A preliminary review should be carried out on products submitted to the agency before any major testing is undertaken.

A-2-2.7 Such inspections should include, in most instances, witnessing of production tests. With certain products the certification organization inspectors should select samples from the production line and submit them to the main laboratory for countercheck testing. With other products, it may be desirable to purchase samples in the open market for test purposes.

A-2-4.1 For example, for structural fire fighting, protective coat and protective trousers meeting the requirements of NFPA 1971 are required. For hazardous materials operations, protective garments meeting the requirements of NFPA 1991 or NFPA 1992 are required. As of the writing of this document, standards are under development for wildland fire fighting protective clothing and proximity fire fighting protective clothing.

A-2-5.1 To avoid possible damage to the garment and possible reduction and loss of inherent or treated flame resistant characteristics of the garment, contact the manufacturer prior to disinfecting or cleaning by a method not prescribed in the garment's label.

For information relative to the prevention and transmission of communicable diseases and carcinogens from contaminated garments consult International Association of Fire Fighters, Centers for Disease Control, local board of public health, the American Medical Association, or the United States Fire Administration.

A-3-1.3 Seam Efficiency.

(a) Seam efficiency for both critical stress seam assemblies and noncritical stress seam assemblies made from inherently flame resistant fabrics should demonstrate a minimum 65 percent ratio.

(b) Seam efficiency for both critical stress seam assemblies and noncritical stress seam assemblies made from flame retardant treated fabrics should demonstrate a minimum 75 percent ratio.

(c) Sewn seam strength should be evaluated in the as-received condition by testing in accordance with ASTM D 1683, *Standard Test Method for Failure in Sewn Seams of Woven Fabrics*.

Definitions of Sewn Seam Terms.

(a) *Seam Efficiency.* The ratio expressed as a percentage of the breaking force required to rupture a sewn seam to that required to rupture a fabric.

(b) *Seam Assembly.* The composite structure obtained when fabric(s) are joined by means of a seam.

NOTE: Seam assembly can be considered to be either critical stress or noncritical stress.

(c) *Critical Stress.* Those junctures at which the greatest forces are exerted, e.g., trousers: seat seam, out seam, crotch seam, inseam, and pocket wells; shirts: side seam and shoulder seam.

(d) *Noncritical Stress.* Those junctions at which minimum forces are exerted, e.g., trousers: cuff seam, pocketing, and belt loops; shirts: cuff, hems, and collars.

(e) *Sewn Seam Strength.* The maximum resistance to rupture of the junction formed by stitching together two or more fabric sections.

Thread Selection

The following guide can be used to make thread selections:

Fabric Weight	Thread Size	Breaking Strength	Maximum Elongation	Yardage/lb. Minimum	Maximum
SHIRT WEIGHT					
Light	Tex 27-35	2.00 lbs	30%	12,402 —	18,372
Medium/Heavy	Tex 40-60	2.35/3.60 lbs	30/35%	7,087—	12,401
TROUSER WEIGHT					
Light	Tex 80-90	4.90-5.50 lbs	35%	4,725—	6,200
Medium/Heavy	Tex 90-105	5.50/6.45 lbs	35%	4,134—	4,725

A-4-2.3 The wash procedures referenced for this and subsequent sections are described by the following (see Table 1, AATCC 135): Permanent Press (machine cycle) 120°F, ± 10°F (49°C, ± 3°C) (washing temperature), tumble dry, permanent press (drying procedure).

A-4-2.3.1 An example of an alternate detergent for use is IEC Test Detergent (BS 5651).

A-5-1.1 AATCC publications are available from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, North Carolina 27709.

A-5-1.2 GSA Publications can be obtained from General Services Administration, Specifications Activity; Printed Materials Supply Division; Building 197, Naval Weapons Plant, Washington, DC 20407. Single copies are generally available at the General Services Administration Business Centers in cities throughout the United States. They are also available from the U.S. Government Printing Office.

Appendix B Referenced Publications

B-1 The following documents or portions thereof are referenced within this standard for informational purposes only and thus are not considered part of the requirements of this document. The edition indicated for each reference is the current edition as of the date of the NFPA issuance of this document.

B-1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 1971-1986, *Standard on Protective Clothing for Structural Fire Fighting*

NFPA 1991-1990, *Standard on Vapor-Protective Suits for Hazardous Chemical Engineers*

NFPA 1992-1990, *Standard on Liquid Splash-Protective Suits for Hazardous Chemical Emergencies.*

B-1.2 The following publications are available from ASTM, 1916 Race Street, Philadelphia, PA 19103.

ASTM D 1424, *Standard Test Method for Tear Resistance of Woven Fabrics by Falling-Pendulum (Elmendorf) Apparatus*, 1981

ASTM D 1682, *Standard Test Methods for Breaking Load and Elongation of Textile Fabrics*, 1975

ASTM D 1683, *Standard Test Method for Failure in Sewn Seams of Woven Fabrics*, 1981

ASTM D 3776, *Standard Test Method for Weight (mass per unit area) of Woven Fabric*, 1979

ASTM D 3787, *Standard Test Method for Bursting Strength of Knitted Goods-Constant-Rate-of-Traverse (CRT) Ball Burst Test*, 1980.

B-1.3 The following publications are available from American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

AATCC 8, *Colorfastness to Crocking*, 1981

AATCC 16E, *Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light*, 1982

AATCC 61, *Colorfastness to Washing, Domestic; and Laundering, Commercial: Accelerated*, 1980

AATCC 135, *Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics*, 1987.

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SUBMITTING PROPOSALS ON
NFPA TECHNICAL COMMITTEE DOCUMENTS

Contact NFPA Standards Administration for final date for receipt of proposals on a specific document.

INSTRUCTIONS

**Please use the forms which follow for submitting proposed amendments.
Use a separate form for each proposal.**

1. For each document on which you are proposing amendment indicate:
   (a) The number and title of the document
   (b) The specific section or paragraph.

2. Check the box indicating whether or not this proposal recommends new text, revised text, or to delete text.

3. In the space identified as "Proposal" include the wording you propose as new or revised text, or indicate if you wish to delete text.

4. In the space titled "Statement of Problem and Substantiation for Proposal" state the problem which will be resolved by your recommendation and give the specific reason for your proposal including copies of tests, research papers, fire experience, etc. If a statement is more than 200 words in length, the technical committee is authorized to abstract it for the Technical Committee Report.

5. Check the box indicating whether or not this proposal is original material, and if it is not, indicate source.

6. If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee.

7. Type or print legibly in black ink.

NOTE: The NFPA Regulations Governing Committee Projects in Paragraph 10-10 state: Each proposal shall be submitted to the Council Secretary and shall include:

(a) identification of the submitter and his affiliation (Committee, organization, company) where appropriate, and

(b) identification of the document, paragraph of the document to which the proposal is directed, and

(c) a statement of the problem and substantiation for the proposal, and

(d) proposed text of proposal, including the wording to be added, revised (and how revised), or deleted.

FORM FOR PROPOSALS ON NFPA TECHNICAL COMMITTEE DOCUMENTS

Mail to: Secretary, Standards Council
National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101

Note: All proposals must be received by 5:00 p.m. E.S.T./E.S.D.T. on the published proposal closing date.

Date 5/18/85 **Name** John B. Smith **Tel. No.** 617-555-1212

Address 9 Seattle St.. Seattle, WA 02255

Representing (Please indicate organization, company or self) Fire Marshals Assn. of North America

1. a) Document Title: Protective Signaling Systems **NFPA No. & Year** NFPA 72D

b) Section/Paragraph: 2-7.1 (Exception)

FOR OFFICE USE ONLY

Log #: _____

Date Rec'd: _____

Proposal #: _____

2. Proposal recommends: (Check one)
- ☐ new text
- ☐ revised text
- ☒ deleted text.

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted):

Delete exception.

4. Statement of Problem and Substantiation for Proposal:

A properly installed and maintained system should be free of ground faults. The occurrence of one or more ground faults should be required to cause a "trouble" signal because it indicates a condition that could contribute to future malfunction of the system. Ground fault protection has been widely available on these systems for years and its cost is negligible. Requiring it on all systems will promote better installations, maintenance and reliability.

5. ☒ **This Proposal is original material.**

☐ **This Proposal is not original material; its source (if known) is as follows:** _____

(Note Original material is considered to be the submitter's own idea based on or as a result of his own experience, thought, or research and, to the best of his knowledge, is not copied from another source.)

I agree to give NFPA all and full rights, including rights of copyright, in this Proposal and I understand that I acquire no rights in any publication of NFPA in which this Proposal in this or another similar or analogous form is used.

John B. Smith

Signature

PLEASE USE SEPARATE FORM FOR EACH PROPOSAL