



Designation: F 1449 – 01

## Standard Guide for Care and Maintenance of Flame, Thermal and Arc Resistant Clothing<sup>1</sup>

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### 1. Scope

1.1 This guide provides recommendations for the care and maintenance of clothing that is flame, thermal, and arc resistant.

NOTE 1—The focus of this standard is the laundering process. More detailed information on decontamination, inspection, storage and repair is available in NFPA 2113.

1.2 These recommendations address the Industrial laundering process.

1.2.1 This guide does not provide detailed suggestions for dry cleaning. For more information contact your processor; his/her dry cleaning equipment supplier and solvent supplier; and the fiber, fabric, and garment manufacturers.

1.2.2 This guide does not apply to home laundering of flame, thermal, and arc resistant clothing. Follow label directions or contact garment supplier. For best cleaning results and proper maintenance of the protective characteristics of flame, thermal, and arc resistant clothing the services of a professional processor is recommended. (See X1.1.)

1.2.3 This guide does not apply to specialized protective garments such as specialized firefighter turnout gear and proximity firefighter ensembles.

1.3 This guide also identifies inspection criteria that are significant to the performance of flame, thermal, and arc resistant clothing.

### 2. Referenced Documents

2.1 *ASTM Standards:*

D 123 Terminology Relating to Textiles<sup>2</sup>

F 1494 Terminology Relating to Protective Clothing<sup>3</sup>

2.2 *Other Standard:*

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee F23 on Protective Clothing and is the direct responsibility of Subcommittee F23.80 on Flame and Thermal.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 01.06.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 11.03.

NFPA 2113 Standard for Care of Stationhouse Gear

### 3. Terminology

3.1 *Definitions of Terms Specific to This Standard*—The following terms have been defined specifically as they relate to this guide:

3.1.1 *care, n*—procedures for cleaning, sterilization, decontamination, and storage of flame, thermal, and arc resistant clothing.

3.1.2 *end user, n*—the entity or organization whose employees ultimately wear the flame, thermal, and arc resistant clothing.

3.1.3 *finish, n*—a chemical or mechanical modification, or both, of the fabric for a specific performance result.

3.1.4 *finishing technique, n*—the mechanical means by which the garment is put in its final state (for example, pressing, drying, wrinkle removal, and so forth).

3.1.5 *laundry wash formula, n*—the details related to procedures, cycle times, temperatures, and chemicals used in the laundering process.

3.1.6 *maintenance, n*—the procedures for inspection, repair, and removal from service of flame, thermal, and arc resistant clothing.

3.1.7 *processing launderer (processor), n*—the party performing the operation of cleaning or repairing, or both of the flame, thermal, and arc resistant clothing.

### 4. Summary of Guide

4.1 This guide provides guidelines for use by suppliers of the flame, thermal, and arc resistant clothing including the fabric and fibers used in its construction, processors, and the end user to effectively maintain flame, thermal, and arc resistant clothing and to provide a means of determining when such items should be removed from service. This includes the following:

4.1.1 Classification of flame, thermal, and arc resistant clothing by fiber, fabric, and finish.

4.1.2 Listing of elements to consider when developing wash formulas