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Standard Guide for Home Laundering Care and Maintenance of Flame, Thermal and Arc Resistant Flame Resistant or Arc Rated Clothing¹

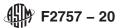
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1. Scope

- 1.1 This guide provides recommendations for home laundering of clothing that is flame, thermal, and arc resistant. flame resistant or arc rated. These recommendations address the home laundering process. Home laundering is an effective cleaning process for flame resistant or arc rated garments; follow all label care instructions.
- 1.1.1 This guide does not apply to dry cleaning of flame, thermal, and are resistant industrial laundering of flame resistant or arc rated clothing. For more information on dry cleaning, follow label instructions industrial laundering, follow Guide F1449 or contact your garment supplier or fabric manufacturer: supplier.
- 1.1.2 This guide does not apply to industrial laundering of flame, thermal, and are resistant dry cleaning of flame resistant or arc rated clothing. For more information on industrial laundering, dry cleaning, follow Guidelabel F1449 instructions or contact your garment supplier or fabric manufacturer. Dry cleaning indicates cleaning by a professional dry cleaner.
- 1.2 When garments are laundered properly, using the proper detergent, home laundering is an effective cleaning process. The National Institute for Occupational Safety and Health (NIOSH) recommends leaving clothing soiled with hazardous chemicals at work to be laundered by the employer or, if such clothing is washed at home, to launder separately from the family wash.
- 1.3 It is important that potentially flammable contaminants are removed from garments during the wash process. If flammable contaminants are not removed, the flame resistance of the garment may be compromised. Effective cleaning and proper maintenance of the protective characteristics of flame resistant or arc rated clothing should include consideration of cleaning, repair, and replacement.
- 1.3.1 To reduce the potential of employees wearing garments contaminated with flammable substances, the end user should analyze the soil conditions to which a workerwearer may be exposed, along with the effectiveness of the wash procedure. In the event home laundering If it is deemed ineffective, alternative effective solutions should be pursued (dry cleaning, industrial laundering, laundry, surfactants, disposable FR coveralls, etc.).
- 1.4 Certain laundry chemicals that may have an adverse effect on fabric flame resistance are identified in this guide and should not be used. It is important that the processes and materials used to launder flame resistant garments are compatible with the FR materials to ensure that the FR protection of the garment is not compromised during the laundering process.
- 1.5 It is the responsibility of the end user to determine if their laundering method is the appropriate care and maintenance procedure for their application. (See Appendix X1 and X1.1.)
- 1.6 This guide does not apply to specialized protective garments such as specialized firefighter turnout gear and proximity firefighter ensembles.
- 1.7 This guide also provides recommendations for inspection criteria that are significant to the performance of flame, thermal, and are resistantflame resistant or arc rated clothing.
- 1.8 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.
- 1.9 This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

¹ This guide is under the jurisdiction of ASTM Committee F23 on Personal Protective Clothing and Equipment and is the direct responsibility of Subcommittee F23.80 on Flame and Thermal.

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2. Referenced Documents

2.1 ASTM Standards:²

D123 Terminology Relating to Textiles

F1449 Guide for Industrial Laundering Care and Maintenance of Flame Resistant or Arc Rated Clothing

F1494 Terminology Relating to Protective Clothing

3. Terminology

- 3.1 Definitions of Terms Specific to This Standard:
- 3.1.1 *care and maintenance, n*—effective cleaning to remove soil and maximize useful life of garments while maintaining (not removing) protective properties and procedures for inspection, repair, and removal from service.
- 3.1.2 *end user, n*—the entity or organization whose employees ultimately wear the flame, thermal, and are resistant flame resistant or arc rated clothing and is responsible for care and maintenance of the clothing.
- 3.1.3 soil, fabric, n—dirt or other foreign substances which become attached to the surface of protective clothing. in textiles, a planar structure consisting of yarns or fibers.
- 3.1.4 wearer, n—the individual who wears flame, thermal or are resistant clothing and is responsible for care and maintenance of the clothing.
 - 3.1.4 garment, n—an article of clothing used to cover the body.
- 3.1.5 *fabric*, *soil*, *n*—in textiles, a planar structure consisting of yarns or fibers. <u>foreign substances on garments which are not part</u> of the garment construction or materials.
 - 3.1.6 wearer, n—the individual who wears flame resistant or arc rated clothing.

4. Summary of Guide

- 4.1 This guide provides recommendations to effectively care for and maintain flame, thermal, and are resistant flame resistant or arc rated clothing. The guidelines include:
 - 4.1.1 A listing of elements to consider when laundering at home.
 - 4.1.2 Recommendations for removing flame, thermal, and are resistantflame resistant or arc rated clothing from service.
- 4.1.3 Recommendations for the repair, modification, and fit of flame, thermal and are resistant flame resistant or arc rated clothing.

5. Significance and Use

- 5.1 This guide is intended for use by employees of the end user, such as safety personnel or program administrators, who have chosen to implement a home laundered flame, thermal home-laundered flame resistant or arc resistant and clothing program.
- 5.2 This guide describes the key components involved in the home care and maintenance of flame, thermal, and are resistant flame resistant or arc rated clothing. The decision to home launder flame, thermal and are resistant flame resistant or arc rated clothing is part of an overall hazard analysis. It should include the nature of the hazard, the soils, and any chemicals present in the workplace. Requirements Conditions may exist that require work apparel to be cleaned at work or professionally due to the risk of contamination of the home or waste water caused by the wearer's on the job on-the-job exposure.
- 5.3 The guide provides the end user assistance to <u>developfollow</u> laundering methods that will clean the garment and maintain the <u>flame</u>, thermal, and are resistant <u>flame</u> resistant or arc rated characteristics of the clothing during its useful service life. The guide also provides suggestions for increasing the wear life, appearance, and function of the clothing.
- 5.4 The guide also provides suggestions as to when flame, thermal, and are resistant flame resistant or arc rated garments should be removed from service.
 - 5.5 The guide provides direction on proper garment repair, modification, and permanent removal from service.

6. Procedure

- 6.1 Garment Flame resistant or arc rated garment manufacturers, in consultation with fiber and fabric suppliers, are responsible for providing information on the performance characteristics and maintenance needs of their garments. The end-user end user is responsible for understanding the hazards present in the workplace and selecting appropriate engineering controls and protective equipment and garments to address those hazards and communicating home laundering instructions to the wearer.
- 6.1.1 If questions remain about care and maintenance of flame, thermal and are resistant flame resistant or arc rated clothing, contact the garment manufacturer or garment supplier for specific care instructions for the fabrics or garments.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.