



Designation: F2757 – 20

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

This standard is issued under the fixed designation F2757; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide provides recommendations for home laundering of clothing that is 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 industrial laundering of flame resistant or arc rated clothing. For more information on industrial laundering, follow Guide [F1449](#) or contact your garment supplier.

1.1.2 This guide does not apply to dry cleaning of flame resistant or arc rated clothing. For more information on dry cleaning, follow label instructions or contact your garment supplier or fabric manufacturer. Dry cleaning indicates cleaning by a professional dry cleaner.

1.2 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 wearer may be exposed, along with the effectiveness of the wash procedure. If it is deemed ineffective, effective solutions should be pursued (dry cleaning, industrial laundry, surfactants, disposable FR coveralls, etc.).

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.

Current edition approved April 1, 2020. Published May 2020. Originally approved in 2009. Last previous version approved in 2016 as F2757 – 09 (2016). DOI: 10.1520/F2757-20.

1.4 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 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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D123 [Terminology Relating to Textiles](#)

[F1449 Guide for Industrial Laundering of Flame, Thermal, and Arc Resistant Clothing](#)

[F1494 Terminology Relating to Protective Clothing](#)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

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.

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 resistant or arc rated clothing and is responsible for care and maintenance of the clothing.

3.1.3 *fabric, n*—in textiles, a planar structure consisting of yarns or fibers.

3.1.4 *garment, n*—an article of clothing used to cover the body.

3.1.5 *soil, n*—foreign substances on garments which are not part 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 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 resistant or arc rated clothing from service.

4.1.3 Recommendations for the repair, modification, and fit of 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 resistant or arc rated clothing program.

5.2 This guide describes the key components involved in the home care and maintenance of flame resistant or arc rated clothing. The decision to home launder 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. 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 exposure.

5.3 The guide provides the end user assistance to follow laundering methods that will clean the garment and maintain the flame 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 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 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 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 resistant or arc rated clothing, contact the garment manufacturer or garment supplier for specific care instructions for the fabrics or garments.

6.2 Below are recommendations to provide optimal care and maintenance of flame resistant or arc rated properties.

6.2.1 Always follow the care label.

6.2.2 Use household laundry detergents. Do not use fatty-based or bar soaps. Liquid detergents are recommended.

6.2.2.1 Review garment care labels or contact garment manufacturers for a list of detergents acceptable for use with their flame resistant and arc rated clothing.

6.2.3 Do not use chlorine bleach, hydrogen peroxide, starch, fabric softeners, or detergents with chlorine bleach, hydrogen peroxide, or derivatives of chlorine bleach or hydrogen peroxide. Follow manufacturer's recommendations regarding pre-treatments.

NOTE 1—If there are questions about whether a cleaning product contains these chemicals, refer to the product's ingredients or contact the manufacturer.

6.2.4 Loosely add clothing to the washing machine. Do not overload the machine. Follow the washing machine manufacturer's instructions for acceptable wash load sizes.

6.2.5 Select a machine cycle that is appropriate for the soil level and type of clothing being handled and use the hottest water allowed by the clothing care label.

6.2.6 Use soft water or detergent specifically designed for hard water.

6.2.7 Clothing soiled with combustible or flammable chemicals should be handled carefully and in accordance with pre-established procedures established by the end user, as stated in 5.1. In addition, failure to adequately remove these chemicals could compromise the flame resistant effectiveness of the soiled area of the garment.

NOTE 2—Garments soiled with hazardous chemicals should only be handled by qualified individuals with techniques approved for such materials.

6.2.8 Protective apparel designed not to be laundered or dry cleaned, or distinctly of a limited use or disposable, shall not be laundered or reused in accordance with their label.

6.3 Listed below are recommendations for increasing the wear life, appearance, and comfort of the clothing.

6.3.1 It is recommended to launder FR and non-flame-resistant garments separately.

6.3.2 Pre-treat stains and heavy soil lines on collars and cuffs. Rub with full-strength, heavy-duty liquid detergent or off-the-shelf pre-treatment products following the product's recommendations for use.

6.3.3 Wash in the water temperature recommended by the label.

6.3.4 Turn garments inside out when laundering.