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A Guide to United States Personal Protective Equipment Compliance Requirements

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Abstract

This Guide addresses compliance requirements for personal protective Equipment (PPE) used in the workplace, except for PPE used in a nuclear or medical setting. Several U.S. federal agencies administer regulations associated with Personal Protective Equipment.

Keywords

compliance requirements, personal protective equipment, PPE

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1. How to Use This Guide

- Regulations are mandatory
- Standards are voluntary (unless “Incorporated by Reference” in a regulation)
- Guidelines may be voluntary (but are often *de facto* industry standards)
- “[Blue](#)” text indicates a hyperlink to a website, page, or document on the web

This Guide addresses personal protective equipment (PPE) used in the workplace, except for PPE used in a nuclear or medical setting. It also does not include body armor for law enforcement applications or hearing protection.

2. Overview of U.S. Federal Regulatory Framework

Once Congress has enacted a law, the appropriate federal agency (e.g., the Consumer Product Safety Commission, the Federal Trade Commission, the National Highway Traffic and Safety Administration, *et al.*) may create the regulations to implement the law. Before such regulations can be adopted, the appropriate federal agency ordinarily will issue a notice of proposed rulemaking (NPRM) to solicit public comments on the proposed rules. To provide an opportunity for public comment, the appropriate federal agency must issue draft regulations, or "Proposed Rules," that are published in the [Federal Register](#) and, when appropriate, as a World Trade Organization (WTO) Technical Barriers to Trade (TBT) notification. The agency reviews the comments and can issue a "Final Rule" that is also published in the *Federal Register* and later published annually in the [Code of Federal Regulations \(CFR\)](#). Together, the enabling acts and laws [published in the [United States Code \(USC\)](#) once passed] and the final regulations (published in the *CFR*) provide a framework for the implementation and enforcement of most federal laws in the United States.

3. Federal Regulatory Authorities and Technical Regulations (Mandatory)

Several U.S. federal agencies administer regulations associated with Personal Protective Equipment.

Agency	Scope
Consumer Product Safety Commission (CPSC)	Product safety; flammability; hazardous substances
Customs and Border Protection (CBP)	Country of origin for most imported products
Environmental Protection Agency (EPA)	Antimicrobial clothing
Federal Trade Commission (FTC)	Labeling (care labeling, fiber content labeling, environmental labeling, country of origin labeling, advertising)

National Institute for Occupational Safety and Health (NIOSH)	Respirators
Occupational Safety and Health Administration (OSHA)	Personal protective equipment
United States Coast Guard (USCG)	Personal flotation devices
United States Department of Agriculture (USDA)	Organic fiber

3.1. [Consumer Product Safety Commission \(CPSC\)](#)

3.1.1. Consumer Product Safety Act (CPSA)

[Title 15, United States Code, Chapter 47, Sections 2051-2089](#)

The Consumer Product Safety Act, entered into law on October 27, 1972, was enacted to establish the Consumer Product Safety Commission and define its authority to protect the public against unreasonable risks of injury associated with consumer products; assisting consumers in evaluating the comparative safety of consumer products; developing uniform safety standards for consumer products; and promoting research and investigation into the causes and prevention of product-related deaths, illnesses, and injuries.

3.1.2. Consumer Product Safety Improvement Act of 2008 (CPSIA)

[Public Law 110–314, August 14, 2008](#)

On August 14, 2008, the President signed Public Law 110-314 (Consumer Product Safety Improvement Act of 2008). On August 12, 2011, he signed into law amendments to the Act, [Public Law 112–28, August 12, 2011](#). The Act provided CPSC with significant new regulatory and enforcement tools to amend and enhance several CPSC statutes, including the Consumer Product Safety Act.

3.1.3. Certificates and Mandatory Third-Party Testing

[Section 102 of the CPSIA](#) requires every manufacturer or importer of all consumer products that are subject to a consumer product safety rule enforced by the CPSC to issue a general certificate of conformity based on testing of the product and state that the product complies with the applicable standard, regulation, or ban. The certificate must accompany the product and be furnished to the retailer or distributor. CPSC also has regulations for certificates of compliance; they can be found at [16 CFR 1110](#).

Every manufacturer of a non-children's product (and the private labeler of such product, if such product bears a private label) is subject to CPSC regulations pertaining to:

- Vinyl plastic film ([16 CFR 1611](#))
- Wearing apparel ([16 CFR 1610](#))

For more detailed information, see CPSC's:
[General Certificate of Conformity](#)
[Testing and Certification](#)
[FAQs - Certification and Third-Party Testing](#)
[COVID-19 \(provides information on non-medical face coverings, gowns, and gloves\)](#)

3.1.4. Flammable Fabrics Act

[Title 15, United States Code, Chapter 25, Sections 1191-1204](#)

The Flammable Fabric Act prohibits the manufacture for sale, the importation into the United States, the introduction, delivery for introduction, transportation, the sale or delivery after a sale, or shipment in commerce of any product, fabric, or related material which fails to conform to flammability standards or regulations issued under this Act. Standards have been established for the flammability of clothing textiles and vinyl plastic film (used in clothing),

This Act applies to all fabric, which is defined in the Act as "any material (except fiber, filament, or yarn for other than retail sale) woven, knitted, felted, or otherwise produced from or in combination with any natural or synthetic fiber, film, or substitute thereof which is intended for use or which may reasonably be expected to be used, in any article of wearing apparel or interior furnishing."

For more detailed information, see CPSC's:
[Flammable Fabrics Act](#)

3.1.5. Flammability of Clothing

[16 CFR 1610 – Standard for the Flammability of Clothing Textiles](#) provides methods of testing the flammability of clothing and textiles intended for clothing by classifying fabrics into three flammability classes based on their speed of burning. This minimum standard specifies that textiles used in apparel must meet class 1 or 2 flammability requirements. Class 3 textiles, the most dangerously flammable fabrics, are unsuitable for use in clothing because of their rapid and intense burning characteristics.

For more detailed information, see CPSC's:
[Flammable Fabrics Act](#)
[Laboratory Test Manual for 16 CFR Part 1610: Standard for the Flammability of Clothing Textiles](#)

3.1.6. Flammability of Vinyl Plastic Film

Vinyl plastic film used in apparel must comply with [16 CFR 1611 - Standard for the Flammability of Vinyl Plastic Film](#). The standard applies to all uncovered or exposed parts of wearing apparel made from non-rigid, unsupported plastic, rubber, or other synthetic or natural film or sheeting, including transparent, translucent, and opaque material, whether plain,

embossed, molded, or otherwise surface treated, which is in a form or condition ready for use in wearing apparel, and includes film or sheeting exceeding 0.254 mm (10 mils) in thickness.

3.2. Customs and Border Protection (CBP)

3.2.1. Country of Origin: Marking of Imported Articles and Containers

Title 19, United States Code, Chapter 4, Section 1304

All products imported into the U.S. must conform to [19 CFR 134, Country of Origin Marking](#) regulations. These regulations require that every article of foreign origin (or its container) imported into the U.S. be marked in a conspicuous place as legibly, indelibly, and permanently as the nature of the article (or container) will permit and in such a manner as to indicate to the ultimate purchaser in the U.S., the English name of the country of origin of the article at the time of importation.

For more detailed information, see CBP's:
[Marking of Country of Origin on U.S. Imports](#)

3.3. Environmental Protection Agency (EPA)

3.3.1. Antimicrobial Clothing and Household Textiles: The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Title 7, United States Code, Chapter 6, Section 136

This Act provides federal regulation of the distribution, sale, and use of pesticides to protect human health and the environment. Products that kill or repel bacteria or germs are pesticides and must be registered with the EPA before distribution or sale. The EPA will not register a pesticide until it has been tested to show that it will not pose an unreasonable risk when used according to the directions. This includes pesticides used on clothing or textiles to provide antimicrobial or other pesticidal characteristics.

FIFRA does not allow companies to make public health pesticidal claims for any product distributed or sold unless the product has been approved and registered by EPA or is covered by an exemption from registration. The EPA will take action against companies that make such claims.

For more detailed information, see EPA's
[Federal Insecticide, Fungicide, and Rodenticide Act \(FIFRA\)](#)
[Consumer Products Treated with Pesticides](#)
[Pesticide Registration Notices by Year](#)
[Pesticide Registration](#)
[Pesticide Product Labels](#)

3.4. [Federal Trade Commission \(FTC\)](#)

3.4.1. Federal Trade Commission Act (FTC Act)

[Title 15, United States Code, Chapter 2, Subchapter I, Sections 41-58](#)

The FTC Act broadly prohibits unfair or deceptive acts or practices affecting commerce. The commission will find deception if, either by the inclusion or exclusion of information, it is likely to:

- Mislead consumers who are acting reasonably under the circumstances and
- Affect the consumer's choice or conduct, thereby leading to injury.

The FTC Act allowed the FTC to enact regulations to prohibit unfair or deceptive acts or practices.

For more detailed information, see FTC's:

[Clothing and Textiles Resource from the FTC's Bureau of Consumer Protection \(BCP\) Business Center](#)

3.4.2. The Textile Fiber Products Identification Act

[Title 15, United States Code, Chapter 2, Subchapter V, Section 70](#)

[16 CFR 303, Rules and Regulations under the Textile Fiber Products Identification Act](#)

The importation, manufacture, sale, offer for sale, transportation for sale, distribution, or advertising of any textile fiber product that is misbranded or falsely or deceptively advertised is unlawful and is considered an unfair method of competition and an unfair and deceptive act or practice in commerce under the FTC Act. To avoid being considered misbranded, the Act requires that most textile products have a label attached listing:

- the generic names and percentages by weight of the constituent fibers in the product;
- the name under which the manufacturer or other responsible company does business; its word trademark, used as a house mark, registered in the United States Patent Office; or, in lieu thereof, the registered identification number ("RN number") of such company; and
- the name of the country where the product was processed or manufactured.

The Textile Fiber Products Identification Act also contains advertising and record-keeping provisions.

A label must be affixed to each textile product and, where required, to its package or container securely. Such label shall be conspicuous and durable so as to remain attached to the product and its package throughout any distribution, sale, re-sale, and until sold and delivered to the ultimate consumer.

Each textile fiber product with a neck opening must have a label disclosing the country of origin affixed to the inside center of the neck midway between the shoulder seams or near another label

affixed to the inside center of the neck. The fiber content and RN or name of the company may be disclosed on the same label as the country of origin or on another conspicuous and readily accessible label or labels on the inside or outside of the garment. On all other textile products, the required information must be disclosed on a conspicuous and readily accessible label or labels on the inside or outside of the product. The country-of-origin disclosure must always appear on the front side of the label. Other required information may appear either on the front or the reverse side of a label, provided that the information is conspicuous, readily accessible, and legible.

Packaged products must have required labeling on the product and on the packaging unless the product label is clearly visible through the packaging.

Hangtags stating a fiber generic name, trademark, or fiber characteristics that do not disclose the product's full fiber content are allowed. However, if the textile product contains any other fiber, the hangtag must disclose clearly and conspicuously that it does not provide the product's full fiber content (*e.g.*, "This tag does not disclose the product's full fiber content" or "See label for the product's full fiber content").

For more detailed information, see FTC's:

[Threading Your Way Through the Labeling Requirements Under the Textile and Wool Acts](#)

3.4.3. Bamboo Claims

If a textile product contains rayon, the FTC requires the marketer to label the product as containing rayon regardless of the source material used to make the rayon. The Textile Rules would not prohibit the non-deceptive use of the term bamboo to describe the source of the rayon fibers in the product, such as "Rayon made from Bamboo." If the product contains bamboo fibers that have not been made into rayon or some other manufactured fiber, the FTC requires the marketer to label the product as containing bamboo. Advertising or labeling a product as bamboo instead of rayon requires competent and reliable evidence, such as scientific tests and analyses, to show that it is made of actual bamboo fiber that has not been made into a manufactured fiber such as rayon. The same standard applies to other claims, such as a claim that rayon fibers made from bamboo retain natural antimicrobial properties from the bamboo plant.

For more detailed information, see FTC's:

[How to Avoid Bamboozling Your Customers](#)

3.4.4. The Wool Products Labeling Act of 1939

[Title 15, United States Code, Chapter 2, Subchapter III, Section 68](#)

[16 CFR 300 Rules and Regulations under The Wool Products Labeling Act of 1939](#)

The importation, manufacture, sale, offer for sale, transportation for sale, distribution, or advertising of any wool product that is misbranded or falsely or deceptively advertised is unlawful and is considered an unfair method of competition and an unfair and deceptive act or

practice in commerce under the Federal Trade Commission Act. The Wool Products Labeling Act requires marketers to attach a label to each wool product disclosing:

- the percentages by weight of the wool, recycled wool, and other fibers accounting for 5% or more of the product, and the aggregate of all other fibers;
- the maximum percentage of the total weight of the wool product of any non-fibrous matter;
- the name under which the manufacturer or other responsible company does business or, in lieu thereof, the registered identification number ("RN") of such company; and
- the name of the country where the wool product was processed or manufactured.

The Wool Rules allow certain hangtags stating a fiber generic name, trademark, or fiber characteristics that do not disclose the product's full fiber content; however, if the wool product contains any other fiber, the hangtag must disclose clearly and conspicuously that it does not provide the product's full fiber content (e.g., "This tag does not disclose the product's full fiber content" or "See label for the product's full fiber content")

The Wool Act also contains advertising and record-keeping provisions.

Products containing fiber from other animals must comply with the Fur Products Labeling Act or the Textile Products Identification Act.

For more detailed information, see FTC's:

[Threading Your Way Through the Labeling Requirements Under the Textile and Wool Acts](#)

[Cachet of Cashmere: Complying with the Wool Products Labeling Act](#)

3.4.5. Leather Products

[16 CFR 24, Guides for Select Leather and Imitation Leather Products](#)

These guides apply to the manufacture, sale, distribution, marketing, or advertising of all kinds or types of leather or simulated leather, including footwear.

3.4.6. Environmental Claims

[16 CFR 260, Guides for the Use of Environmental Marketing Claims](#)

These guides apply to environmental claims included in labeling, advertising, promotional materials, and all other forms of marketing, whether asserted directly or by implication, through words, symbols, emblems, logos, depictions, product brand names, or through any other means, including marketing through digital or electronic means, such as the Internet or electronic mail. The guides apply to any claim about the environmental attributes of a product, package, or service in connection with the sale, offering for sale, or marketing of such product, package, or service for personal, family, or household use or for commercial, institutional, or industrial use.

For more detailed information, see FTC's:

[Environmental Claims: Summary of the Green Guides](#)

3.4.7. Care Labels

[16 CFR 423, Care Labeling of Textile Wearing Apparel and Certain Piece Goods as Amended](#)
The Federal Trade Commission's (FTC) Care Labeling Rule requires manufacturers and importers to attach care instructions to garments.

Note: Manufacturers and importers need not provide care information with products sold to institutional buyers for commercial use.

The Rule requires that manufacturers or importers comply with the following:

- Provide instructions prescribing a regular care procedure for the garment or provide warnings if the garment cannot be cleaned without harm
- Have a reasonable basis for the care labeling instructions, including that following them will cause no substantial harm to the product
- Warn consumers about certain procedures that they may assume to be consistent with the instructions on the label but that would harm the product. For example, if a pair of pants is labeled for washing, consumers may assume they can iron them. If the pants would be harmed by ironing, the label should read, "Do not iron"
- Ensure that care labels remain attached and legible throughout the useful life of the product

Care labels must be attached to products prior to sale in the United States; however, care labels do not have to be attached to products when they enter the United States. The importer must ensure the labels are attached prior to sale.

Labels must be attached permanently and securely. They must also be legible during the product's useful life and be seen or easily found by consumers at the point of sale. For packaged items, the care label must also appear on the outside of the package or on a hangtag if it is not clearly visible through the packaging.

For more detailed information, see FTC's:
[Clothes Captioning: Complying with the Care Labeling Rule](#)
[Clothing and Textiles Legal Resources](#)

3.5. [National Institute for Occupational Safety and Health \(NIOSH\)](#)

3.5.1. Respirators

NIOSH and its National Personal Protective Technology Laboratory (NPPTL) are responsible for testing and approving respirators used in U.S. occupational settings. NIOSH has developed regulations in [42 CFR 84, Approval Of Respiratory Protective Devices](#) for testing and certifying

respirators. Each respirator and respirator component must meet the applicable requirements of the appropriate subpart when tested by the applicant and by the Institute. Combination respirators must meet the requirements for each type of respirator and be classified by the type of respirator in the combination that provides the least protection to the user.

All respirator types must meet General Construction requirements (Subpart G), Quality Control requirements (Subpart E), and labeling requirements (found in Subpart D).

Respirators must be designed on sound engineering and scientific principles, constructed of suitable materials, and show evidence of good workmanship.

- Respirator components that touch the wearer's skin must be made of non-irritating materials.
- Components that can be replaced must be constructed of materials that will not be damaged by normal handling and be designed to permit easy installation and maintain the effectiveness of the respirator.
- Mouthpieces, hoods, helmets, and facepieces, except those used in single-use respirators, must be able to withstand repeated disinfection.
- Components must not create any hazard to the wearer and must permit easy access for cleaning; functional components must permit easy access for inspection and repair.

Respirators must meet the requirements of the appropriate subpart:

- Self-Contained Breathing Apparatus – Subpart H (42 CFR 84.70 through 42 CFR 84.104)
- Gas Masks — Subpart I (42 CFR 84.110 through 42 CFR 84.126)
- Supplied Air Respirators – Subpart J (42 CFR 84.130 through 42 CFR 81.163)
- Air Purifying Particulate Respirators – Subpart K (42 CFR 84.170 through 42 CFR 84.181)
- Chemical Cartridge Respirators – Subpart L (42 CFR 84.190 through 42 CFR 84.207)
- Special Use Respirators – Subpart N (42 CFR 84.250 through 42 CFR 84.257)
- Closed Circuit Escape Respirators – Subpart O (42 CFR 84.300 through 42 CFR 84.311)

Respirators subjected to subparts H through L must be classified for use as one of the following:

- Entry and escape – Respirators designed and approved for use during entry into a hazardous atmosphere and escape from a hazardous atmosphere.
- Escape only – Respirators designed and approved for use only during an escape from a hazardous atmosphere.

Respirators subjected to subparts H through L above must be classified as approved for use against any or all the following respiratory hazards:

- Oxygen deficiency
- Gases and vapors
- Particles, including dust, fumes, and mists

Unless prescribed by NIOSH otherwise, respirators subjected to subparts H through L must be classified, where applicable, as approved for use during the following prescribed service times:

- Four hours

- Three hours
- Two hours
- One hour
- Forty-five minutes
- Thirty minutes
- Fifteen minutes
- Ten minutes
- Five minutes
- Three minutes

In addition, respirators that have an electrical or electronic component that are used in mines must comply with [30 CFR 18 Electric Motor-Drive Mine Equipment and Accessories](#).

OSHA requires that NIOSH-Approved respirators be used in the workplace per [29 CFR 1910.134](#). NIOSH approves respirators in accordance with [42 CFR 84 Approval of Respiratory Protective Devices](#). Approval means NIOSH has issued a certificate or formal document stating that an individual respirator or combination of respirators has met the minimum requirements for construction, performance, and respiratory protection standards. It also authorized the applicant to use and attach an approval label to any respirator, respirator container, or instruction card for any respirator manufactured or assembled in conformance with the plans and specifications upon which the approval was based.

To gain approval, respirators subject to subparts G through L must be inspected, examined, and tested by the NIOSH National Personal Protective Technology Laboratory following the provisions of the respective subpart and must have been found to provide respiratory protection for fixed periods against the hazards specified in the approval.

Each certification for a respirator designed for mine rescues or other emergency use in mines must include any use limitation related to mine safety and health as a condition of approval.

For more detailed information, see NIOSH's:
[NIOSH Directory of Personal Protective Equipment](#)

3.6. [Occupational Safety and Health Administration \(OSHA\)](#)

3.6.1. Occupational Safety and Health Act Of 1970 (OSH Act)

[United States Code Title 29, Chapter 15](#)

The OSH Act was established to ensure safe and healthful working conditions for every person working in the nation and to preserve human resources. Among many other provisions, the Act provides for the development and promulgation of occupational safety and health standards

3.6.2. Personal Protective Equipment (PPE) – General Requirements

[29 CFR 1910 Subpart I](#)

OSHA regulations require employers to ensure a safe work environment for employees. Within these regulations, OSHA calls out specific personal protective equipment that must be used in specific circumstances. Below are the general requirements for various types of PPE to be used in the workplace. Some industries may have additional or stricter PPE requirements, which are discussed separately.

General Design

[29 CFR 1910.132\(c\)](#) All personal protection equipment must have a safe design and construction for the work to be performed.

Eye and Face Protection

[29 CFR 1910.133 Eye and Face Protection](#)

All eye and face protection for use in the workplace must comply with one of the following standards that have been incorporated by reference or be at least as effective as eye and face protection constructed in accordance with one of the standards:

- ANSI/ISEA Z87.1-2010 *Occupational and Educational Personal Eye and Face Protection Devices*
- ANSI Z87.1-2003 *Occupational and Educational Personal Eye and Face Protection Devices*
- ANSI Z87.1-1989 (R-1998) *Practice for Occupational and Educational Eye and Face Protection*

ANSI Z87.1 sets requirements for testing and permanent marking of eye and face protection devices.

Eye and face protection must comply with requirements specific to the type of eyewear or face protection, including:

- Basic impact and high impact resistance for frames and lenses
- Optical requirements for lenses
- Flammability and corrosion resistance
- Permanent markings

Welding helmets require protection against radiant energy. [29 CFR 1910.133 \(a\)\(5\)](#) provides the minimum protective shade requirement for welding helmets, which is dependent on the type of welding operation for which it is intended. The construction industry has separate requirements for filter lens shade for protection against radiant energy. Minimum shade numbers are provided at [29 CFR 1926.102\(c\)\(1\)](#) for each type of welding operation.

Laser safety goggles, those intended for use with laser beams, must be labeled with the laser wavelengths for which they are intended to be used, the optical density of those wavelengths, and the visible light transmission.

Foot Protection

[29 CFR 1910.136 Foot Protection](#)

Foot protection worn in the workplace must comply with the following standards that have been incorporated by reference or be at least as effective as footwear constructed in accordance with the standards:

- ASTM F-2412-2005 *Standard Test Methods for Foot Protection*
- ASTM F-2413-2005 *Standard Specification for Performance Requirements for Protective Footwear*

ASTM F-2412 addresses impact resistance, compression resistance, metatarsal impact resistance, resistance to electrical conductivity, resistance to electric hazard, static dissipative performance, and puncture resistance.

ASTM F-2413 addresses impact resistance for the toe area of footwear, compression resistance for the toe area of footwear, metatarsal protection, conductive properties, electric shock resistance, static dissipative properties, puncture resistance of footwear bottoms, chain saw cut resistance, and dielectric insulation.

Hand and Arm Protection

[29 CFR 1910.137 Electrical Protective Equipment](#)

Rubber insulating gloves and sleeves must be produced by a seamless process. Materials used from Type II insulating items must be capable of withstanding an ozone test with no visible effects. Items must be free of physical irregularities that can adversely affect the insulating properties of the item. Indentations, protuberances, or embedded foreign material resulting from a manufacturing process are acceptable if the indentation or protuberance blends into a smooth slope when the material is stretched. Foreign material is acceptable if it remains in place when the insulating material is folded and stretches with the insulating material surrounding it.

Required markings must be nonconducting and be applied in such a manner as not to impair the insulating qualities. Marking on gloves must be confined to the cuff of the glove.

Rubber insulating gloves and sleeves must comply with the electrical requirements of this part.

Rubber insulating gloves and sleeves that meet the following standards are deemed to comply with the above performance and electrical requirements.

- ASTM D120-09 *Standard Specification for Rubber Insulating Gloves*
- ASTM D1051-08 *Standard Specification for Rubber Insulating Sleeves*

Additionally, ASTM F1236-96 (2012), Standard Guide for Visual Inspection of Electrical Protective Rubber Products, presents methods and techniques for the visual inspection of electrical protective equipment made of rubber.

Head Protection

[29 CFR 1910.135 Head Protection](#)

Head protection worn in the workplace must comply with any of the following standards that have been incorporated by reference or be at least as effective as head protection constructed in accordance with one of the standards:

- ANSI Z89.1-2009 *American National Standard for Industrial Head Protection*
- ANSI Z89.1-2003 *American National Standard for Industrial Head Protection*
- ANSI Z89.1-1997 *American National Standard for Personnel Protection - Protective Headwear for Industrial Workers*

ANSI Z89.1 addresses requirements for industrial head protection, including:

- General requirements for shell headband, crown straps, accessories, instructions, and markings
- Detailed requirements for the shell headband and crown straps
- Physical requirements, including insulation, impact, and penetration resistance; weight, flammability, and water absorption

Personal Fall Protection

[29 CFR 1910.140 Personal Fall Protection Systems](#)

Personal fall protection systems that are used in the workplace are systems, including all components, used to prevent workers from falling or used to arrest the fall should one occur. Examples include personal fall arrest systems, positioning systems, and travel restraint systems. The system components may include a body harness, anchorage, connectors, and lanyards.

Connectors must be drop forged, pressed or formed steel, or made of equivalent materials.

Components used in personal fall protection must comply with the following:

- Connectors must have a corrosion-resistant finish, and all surfaces and edges must be smooth to prevent damage to interfacing parts of the system.
- Lanyards and vertical lifelines must have a minimum breaking strength of 22.2 kN (5,000 pounds).
- Self-retracting lifelines and lanyards that automatically limit free fall distance to 0.61 m (2 feet) or less must have components capable of sustaining a minimum tensile load of 13.3 kN (3,000 pounds) applied to the device with the lifeline or lanyard in the fully extended position.
- D-rings, snaphooks, and carabiners must be capable of sustaining a minimum tensile load of 22.2 kN (5,000 pounds).
- D-rings, snaphooks, and carabiners must be proof tested to a minimum tensile load of 16 kN (3,600 pounds) without cracking, breaking, or incurring permanent deformation. The gate strength of snaphooks and carabiners must be capable of withstanding a minimum load of 16 kN (3,600 pounds) without the gate separating from the nose of the snaphook or carabiner body by more than 3.175 mm (0.125 inches).
- Snaphooks and carabiners must be the automatic locking type that requires at least two separate, consecutive movements to open
- Snaphooks and carabiners must not be connected to any of the following unless they are designed for such connections:
 - Directly to webbing, rope, or wire rope

- To each other
- To a D-ring to which another snaphook, carabiner, or connector is attached
- To a horizontal lifeline
- To any object that is incompatibly shaped or dimensioned in relation to the snaphook or carabiner such that unintentional disengagement could occur when the connected object depresses the snaphook or carabiner gate, allowing the components to separate
- Anchorages, except window cleaners' belt anchors, must be capable of supporting at least 22.2 kN (5,000 pounds) for each employee attached or designed as part of a complete personal fall protection system that maintains a safety factor of at least two
- Travel restraint lines must be capable of sustaining a tensile load of at least 22.2 kN (5,000 pounds)
- Lifelines must not be made of natural fiber rope. Polypropylene rope must contain an ultraviolet (UV) light inhibitor
- Ropes, belts, lanyards, and harnesses used for personal fall protection must be compatible with all connectors used

Personal fall arrest systems must comply with the following:

- The maximum arresting force on the employee cannot exceed 8 kN (1,800 pounds)
- The system must bring the employee to a complete stop and limit the maximum deceleration distance the employee travels to 1.1 m (3.5 feet)
- It must have sufficient strength to withstand twice the potential impact energy of the employee free falling 1.8 m (6 feet), or the free fall distance permitted by the system
- It must not contact the employee's neck and chin area when used

Positioning systems must meet the following requirements:

- Positioning systems, including window cleaners' positioning systems, that meet the test methods and procedures in [Appendix D to Subpart I of Part 1910 - Test Methods and Procedures for Personal Fall Protection Systems Non-Mandatory Guidelines](#) are considered to be in compliance with the following requirements.
 - All positioning systems, except window cleaners' positioning systems, must withstand a drop test consisting of a 1.2-m (4-foot) drop of a 113-kg (250-pound) weight
 - Window cleaners' positioning systems must be capable of withstanding a drop test consisting of a 1.8-m (6-foot) drop of a 113-kg (250-pound) weight with an initial arresting force of not more than 8.9 kN (2,000 pounds), with a duration not exceeding 2 milliseconds and any subsequent arresting forces to not more than 4.5 kN (1,000 pounds)
- Lineman's body belt and pole strap systems must be able to withstand a dielectric test of 819.7 volts, AC, per centimeter (25,000 volts per foot) for 3 minutes without visible deterioration; a leakage test of 98.4 volts, AC, per centimeter (3,000 volts per foot) with a leakage current of no more than 1 mA; and a flammability test outlined in [29 CFR 1910.140\(e\)\(1\)\(iv\)\(C\)](#)
- A window cleaner's belt must be designed and constructed so that belt terminals will not pass through their fastenings on the belt or harness if a terminal comes loose from the

window anchor, and the length of the runner from terminal tip to terminal tip is 2.44 m (8 feet) or less.

For more detailed information, see OSHA's:
[Personal Protective Equipment](#)

3.6.3. Construction PPE

Additional PPE requirements for use in the construction industry are found primarily in [29 CFR Subpart E \(1926.95 – 1926.107\)](#) unless otherwise stated.

Electrical protection - Electrical protective equipment used in construction includes rubber insulating blankets, rubber insulating matting, rubber insulating covers, rubber insulating line hose, rubber insulating gloves, and rubber insulating sleeves.

Electric protective equipment must be free from physical irregularities that may adversely impact the insulating properties. Surface imperfections (indentations, protuberances, or imbedded foreign material) that occur as the result of the mold imperfections or inherent difficulties in the manufacturing process are acceptable if the indentation or protuberance blends into a smooth slope when the material is stretched and the foreign material remains in place when the insulating material is folded and stretched with the insulating material surrounding it.

Rubber insulating blankets, gloves, and sleeves must be produced by a seamless process and must be clearly marked as follows:

- Class 00 equipment shall be marked Class 00
- Class 0 equipment shall be marked Class 0
- Class 1 equipment shall be marked Class 1
- Class 2 equipment shall be marked Class 2
- Class 3 equipment shall be marked Class 3
- Class 4 equipment shall be marked Class 4
- Nonozone-resistant equipment shall be marked Type I
- Ozone-resistant equipment shall be marked Type II
- Other relevant markings, such as the manufacturer's identification and the size of the equipment, may also be provided

The marking must be non-conductive and must not impair the insulating qualities of the item. Gloves must be marked on the cuff.

Rubber insulating protective equipment must meet the electric requirements specified at 29 CFR 1926.97(a)(2), which includes withstanding AC proof-test voltage and an ozone test.

Rubber insulating equipment meeting the following national consensus standards is deemed to comply with the performance requirements:

- ASTM D120-09 *Standard Specification for Rubber Insulating Gloves*

- ASTM D178-01 (2010) *Standard Specification for Rubber Insulating Matting*
- ASTM D1048-12 *Standard Specification for Rubber Insulating Blankets*
- ASTM D1049-98 (2010) *Standard Specification for Rubber Insulating Covers*
- ASTM D1050-05 (2011) *Standard Specification for Rubber Insulating Line Hose*
- ASTM D1051-08 *Standard Specification for Rubber Insulating Sleeves*

Other electrical protective equipment not mentioned above must be capable of withstanding, without failure, the voltages that may be imposed upon it, which may include transient overvoltages, such as switching surges, as well as nominal line voltage. It must also be able to withstand a current test; current may not exceed 1 microampere per kilovolt of phase-to-phase applied voltage.

Eye and face protection – Protective eye and face devices must comply with one of the following standards that have been incorporated by reference:

- ANSI/ISEA Z87.1-2010 *Occupational and Educational Personal Eye and Face Protection Devices*
- ANSI Z87.1-2003 *Occupational and Educational Personal Eye and Face Protection Devices*
- ANSI Z87.1-1989 (R-1998) *Practice for Occupational and Educational Eye and Face Protection*

29 CFR 1926.102(C) provides the minimum protective shade requirement for welding protection, which is dependent on the type of welding operation for which it is intended. Minimum shade numbers are provided at [29 CFR 1926.102\(c\)\(1\)](#) for each type of welding operation.

All protective goggles intended for laser protection must have a label identifying the following data:

- The laser wavelengths for which use is intended;
- The optical density of those wavelengths;
- The visible light transmission.

Foot protection - Safety-toe footwear for employees shall meet the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967.

Head protection – Head protection used in construction must meet the specification of any one of the following standards that have been incorporated by reference:

- ANSI Z89.1-2009 *American National Standard for Industrial Head Protection*
- ANSI Z89.1-2003 *American National Standard for Industrial Head Protection*
- ANSI Z89.1-1997 *American National Standard for Personnel Protection - Protective Headwear for Industrial Workers - Requirements*

Respirators – [21 CFR 1910.134](#) requires that NIOSH-approved respirators be used in workplaces. See aforementioned section on [NIOSH respirators](#).

Fall Protection – When intended for use in construction, safety belts, lifelines, and lanyards that will be secured above the point of operation to an anchorage or structural member must be capable of supporting 24 kN (5,400 pounds). A safety belt lanyard must be a minimum of 1/2-inch nylon, or equivalent, with a maximum length to provide for a fall of no greater than 1.8 m (6 feet). The rope must have a nominal breaking strength of 24 kN (5,400 pounds).

All safety belt and lanyard hardware must be drop forged or pressed steel, cadmium plated in accordance with type 1, Class B plating specified in [Federal Specification QQ-P-416](#). The surface of the hardware must be smooth and free of sharp edges.

All safety belt and lanyard hardware, except rivets, must be capable of withstanding a tensile loading of 17.8 kN (4,000 pounds) without cracking, breaking, or permanently deforming.

[Subpart M](#) further outlines fall protection requirements.

- Connectors must be drop forged, pressed or formed steel, or made of equivalent materials. In addition, they must have a corrosion-resistant finish, and all surfaces and edges must be smooth to prevent damage to interfacing parts of the system.
- D-rings and snaphooks must have a minimum tensile strength of 22.2 kN (5,000 pounds), and they must be proof-tested to a minimum tensile load of 16 kN (3,600 pounds) without cracking, breaking, or becoming deformed.
- Lanyards and vertical lifelines must have a minimum breaking strength of 22.2 kN (5,000 pounds).
- Self-retracting lifelines and lanyards that automatically limit free fall distance to 0.61 m (2 feet) or less must be capable of sustaining a minimum tensile load of 13.3 kN (3,000 pounds) applied to the device with the lifeline or lanyard in the fully extended position. Self-retracting lifelines and lanyards which do not limit free fall distance to 0.61 m (2 feet) or less, ripstitch lanyards, and tearing and deforming lanyards must be capable of sustaining a minimum tensile load of 22.2 kN (5,000 pounds) applied to the device with the lifeline or lanyard in the fully extended position.
- Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses must be made from synthetic fibers.
- Anchorages used for attachment of personal fall arrest equipment must be capable of supporting at least 22.2 kN (5,000 pounds) per attached employee or be designed as part of a complete personal fall arrest system that maintains a safety factor of at least two.
- Personal fall arrest systems, when stopping a fall, must limit maximum arresting force on an employee to 4 kN (900 pounds) when used with a body belt or 8 kN (1,800 pounds) when used with a body harness. It must bring an employee to a complete stop and limit the maximum deceleration distance an employee travels to 1.07 m (3.5 feet). It must also have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 1.8 m (6 feet) or the free fall distance permitted by the system, whichever is less.

[29 CFR 1926.954](#) requires construction fall protection for use in electrical power transmission and distribution to meet the requirements of subpart M as well as the following:

- Hardware for body belts and positioning straps must be made of drop-forged steel, pressed steel, formed steel, or equivalent material and have a corrosion-resistant finish

that is smooth and free from sharp edges. Buckles must be capable of withstanding an 8.9 kN (2,000 pound-force) tension test with a maximum permanent deformation no greater than 0.4 millimeters (0.0156 inches).

- D-rings must be capable of withstanding a 22-kN (5,000 pound-force) tensile test without cracking or breaking.
- Snaphooks must be capable of withstanding a 22-kN (5,000 pound-force) tension test without failure.
- Body belts and positioning straps must be made of top-grain leather or leather substitute; however, leather and leather substitutes may not be used alone as a load-bearing component of the assembly.
- Plied fabric used in positioning straps and in load-bearing parts of body belts must be constructed so no raw edges are exposed and the plies do not separate.
- Positioning straps must withstand the following tests:
 - A dielectric test of 819.7 volts, AC, per centimeter (25,000 volts per foot) for 3 minutes without visible deterioration;
 - A leakage test of 98.4 volts, AC, per centimeter (3,000 volts per foot) with a leakage current of no more than 1 mA
 - Tension tests of 20 kN (4,500 pounds-force) for sections free of buckle holes and of 15 kN (3,500 pounds-force) for sections with buckle holes;
 - A buckle-tear test with a load of 4.4 kN (1,000 pounds-force)
 - A flammability test in accordance with Table V-1.
- The cushion part of the body belt must not have exposed rivets on the inside and must be at least 76 millimeters (3 inches) in width.
- Tool loops must be situated on the body of a body belt so that the 100 millimeters (4 inches) of the body belt that is in the center of the back, measuring from D-ring to D-ring, is free of tool loops and any other attachments.
- Copper, steel, or equivalent liners must be used around the bars of D-rings to prevent wear between these members and the leather or fabric enclosing them.
- Snaphooks must be of the locking type, meeting the following requirements:
 - The locking mechanism shall first be released, or a destructive force shall be placed on the keeper, before the keeper will open.
 - A force between 6.7 N (1.5 pounds-force) to 17.8 N (4 pounds-force) must be required to release the locking mechanism.
 - With the locking mechanism released and with force applied on the keeper against the face of the nose, the keeper may not begin to open with a force of 11.2 N (2.5 pounds-force) or less, but it must begin to open with a maximum force of 17.8 N (4 pounds-force).
- Body belts and positioning straps shall be capable of withstanding a drop test as outlined in [29 CFR 1926.954\(b\)\(2\)\(xii\)](#)

3.6.4. Fire Protection PPE

[29 CFR Part 1910 Subpart L](#), Fire Protection

PPE used by employees involved in fire protection must conform to the requirements of Subpart L.

Footwear

Protective footwear must meet requirements for class 75 footwear as specified [in OSHA regulations for footwear](#). In addition, protective footwear must be water-resistant for at least 5 inches (12.7 cm) above the bottom of the heel and have slip-resistant outer soles. It must be tested for [puncture resistance](#) and provide protection against penetration of the midsole by a size 8D common nail when at least 1.33 kN (300 pounds) of static force is applied to the nail.

Body Protection

The performance, construction, and testing of fire-resistive coats and protective trousers must be equivalent to the requirements of the National Fire Protection Association (NFPA) standard NFPA No. 1971-1975, "Protective Clothing for Structural Fire Fighting," which is incorporated by reference. The regulation allows for specific variations that are outlined in [29 CFR 1910.156\(e\)\(3\)\(ii\)](#).

Hand protection

Gloves or glove systems must be tested in accordance with the test methods contained in the National Institute for Occupational Safety and Health (NIOSH) 1976 publication, "The Development of Criteria for Fire Fighter's Gloves; Vol. II, Part II: Test Methods," which has been incorporated by reference.

Gloves must meet the criteria for cut, puncture, and heat penetration as outlined in [29 CFR 1910.156\(e\)\(4\)](#) and flame resistance as outlined in [29 CFR 1910.156\(e\)\(4\)\(ii\)](#). In addition, when protective gloves do not provide protection for wrists, they must have wristlets of at least 4.0 inches (10.2 cm) in length.

Head, eye, and face protection

Head protection must have ear flaps and a chin strap that meet the performance, construction, and testing requirements in *Model Performance Criteria for Structural Firefighters' Helmets*, which is incorporated by reference as specified in [29 CFR 1910.6](#) (See appendix D to subpart L).

3.6.5. Longshoring PPE

[29 CFR 1918 Subpart J, Personal Protective Equipment](#)

PPE requirements for people involved in longshoring are equivalent to [OSHA's general requirements](#) except for foot protection.

Foot Protection

Protective footwear must comply with one of the following standards that have been incorporated by reference:

- ASTM F-2412-2005 *Standard Test Methods for Foot Protection*, and ASTM F-2413-2005 *Standard Specification for Performance Requirements for Protective Footwear*

- ANSI Z41-1999 *American National Standard for Personal Protection - Protective Footwear*
- ANSI Z41-1991 *American National Standard for Personal Protection - Protective Footwear*

3.6.6. Shipyard PPE

[29 CFR 1915 Subpart I, Personal Protective Equipment](#)

PPE intended for use by employees of shipyards must comply with the following requirements.

Eye and Face Protection

Eye and face protection must comply with [general OSHA requirements](#). In addition, [29 CFR 1915.153](#) provides the minimum protective shade requirement for welding protection, which is dependent on the type of welding operation for which it is intended. Minimum shade numbers are provided for each type of welding operation.

Head Protection

Head Protection must comply with one of the following standards, which have been incorporated by reference:

- American National Standards Institute (ANSI) Z89.1-2009 *American National Standard for Industrial Head Protection*
- American National Standards Institute (ANSI) Z89.1-2003 *American National Standard for Industrial Head Protection*
- American National Standards Institute (ANSI) Z89.1-1997 *American National Standard for Personnel Protection - Protective Headwear for Industrial Workers - Requirements*

Foot Protection

Protective footwear must comply with any of the following standards, which have been incorporated by reference:

- ASTM F-2412-2005 *Standard Test Methods for Foot Protection*, and ASTM F-2413-2005 *Standard Specification for Performance Requirements for Protective Footwear*
- ANSI Z41-1999 *American National Standard for Personal Protection - Protective Footwear*
- ANSI Z41-1991 *American National Standard for Personal Protection - Protective Footwear*

Personal Fall Arrest Systems

The following are requirements for personal fall arrest systems used by shipyard employees:

Connectors and anchorages

- Connectors must be made of drop forged, pressed, or formed steel or made of materials with equivalent strength.
- Connectors must have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to the interfacing parts of the system.

- D-rings and snaphooks must be capable of sustaining a minimum tensile load of 22.24 kN (5,000 pounds).
- D-rings and snaphooks must be proof-tested to a minimum tensile load of 16 kN (3,600 pounds) without cracking, breaking, or being permanently deformed.
- Anchorages must be capable of supporting at least 22.24 kN (5,000 pounds) per employee attached, or if it is part of a complete personal fall arrest system, it must maintain a safety factor of at least two

Lifelines and lanyards

- Vertical lifelines and lanyards must have a minimum tensile strength of 22.24 kN (5,000 pounds).
- Self-retracting lifelines and lanyards that automatically limit free fall distances to 0.61 m (2 feet) or less shall be capable of sustaining a minimum tensile load of 13.34 kN (3,000 pounds) applied to a self-retracting lifeline or lanyard with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards that do not limit free fall distance to 0.61 m (2 feet) or less, ripstitch lanyards, and tearing and deforming lanyards must be capable of sustaining a minimum static tensile load of 22.24 kN (5,000 pounds) applied to the device when they are in the fully extended position.
- Horizontal lifelines used as part of a complete personal fall arrest system must maintain a safety factor of at least two.

Personal fall arrest systems must:

- Limit the maximum arresting force on a falling employee to 4 kN (900 pounds) when used with a body belt
- Limit the maximum arresting force on a falling employee to 8 kN (1,800 pounds) when used with a body harness
- Bring a falling employee to a complete stop and limit the maximum deceleration distance an employee travels to 1.07 m (3.5 feet)
- Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 1.83 m (6 feet), or the free fall distance permitted by the system, whichever is less

[Appendix B to Subpart I of Part 1915](#) - *General Testing Conditions and Additional Guidelines for Personal Fall Protection Systems* provides non-mandatory testing for personal fall protection systems

Positioning Device Systems

Positioning device systems must conform to the following:

- Connectors must have a corrosion-resistant finish, and all surfaces and edges must be smooth to prevent damage to interfacing parts of this system
- Connecting assemblies must have a minimum tensile strength of 22.24 kN (5,000 pounds)
- Snaphooks must be a locking type

- Restraint (tether) lines must have a minimum breaking strength of 13.34 kN (3,000 pounds)

A window cleaner's positioning system must be capable of withstanding without failure a drop test consisting of a 1.83 m (6-foot) drop of a 113.4 kg (250-pound) weight. The system must limit the initial arresting force to not more than 8.9 Kn (2,000 pounds), with a duration not to exceed 2 milliseconds. The system must limit any subsequent arresting forces imposed on the falling employee to not more than 4.45 Kn (1,000 pounds).

All other positioning device systems must be capable of withstanding without failure a drop test consisting of a 1.22 m (4-foot) drop of a 113.4 kg (250-pound) weight.

3.6.7. Telecommunications PPE

[29 CFR 1910.268, Telecommunications](#)

In addition to general PPE requirements, PPE for telecommunication workers must also meet the following requirements.

Head Protection

Head protection for working near high voltage must comply with ANSI Z89.2-1971, "Safety Requirements for Industrial Protective Helmets for Electrical Workers, Class B," which has been incorporated by reference.

3.6.8. Marine Terminal PPE

[29 CFR 1917 Subpart E, Personal Protection](#)

Requirements for PPE intended for marine terminal employees are equivalent to [OSHA's general requirements](#) except for foot protection.

Foot Protection

Protective footwear must comply with any of the following standards, which have been incorporated by reference:

- ASTM F-2412-2005 *Standard Test Methods for Foot Protection*, and ASTM F-2413-2005 *Standard Specification for Performance Requirements for Protective Footwear*
- ANSI Z41-1999 *American National Standard for Personal Protection - Protective Footwear*
- ANSI Z41-1991 *American National Standard for Personal Protection - Protective Footwear*

3.7. [United States Coast Guard \(USCG\)](#)

3.7.1. Personal Flotation Devices

[46 CFR Subchapter Q, Equipment, Construction, and Materials Specification and Approvals](#)

Personal flotation devices (PFD), also called life jackets, must be tested by a USCG laboratory and approved by USCG.

For type approval (the process to receive Coast Guard Approval), manufacturers must comply with the relevant requirements in the Regulations, successfully complete the specified tests, and be enrolled in a quality control or follow-up program as required. Manufacturers are responsible for having testing done by an independent laboratory.

Coast Guard engineers evaluate the design features and laboratory test report. If the device meets all requirements, it is given a certification of approval. After type approval, the production of approved PFDs is overseen by the recognized laboratory.

Equipment Construction

General construction requirements for lifesaving equipment are found at [46 CFR 160.001](#). In addition, the Regulation includes procedures for approval and production oversight requirements.

A life preserver must meet the following requirements:

- Perform its intended function in all weather and temperatures which may be encountered
- Support 1 kN (22 pounds) in fresh water for 48 hours
- Be capable of being worn inside out, worn clearly in one way, or donned correctly without instructions or assistance by at least 75 percent of persons not familiar with its design
- Be quickly adjustable for a secure fit
- Support wearer in an upright or slightly backward position and provide support to the head so that the face is held above water
- Turn the wearer to a safe position
- Not be damaged or deteriorated by oil products
- Be a highly visible color, such as Indian Orange, International Orange, or Scarlet Munsell Red
- Use threads that meet the requirements found at [46 CFR 164.023](#), and use only one thread per seam

Life preservers that depend upon loose or granulated material for buoyancy are prohibited.

There are additional requirements for components, construction, and marking for the following types of devices:

- Life Preservers, Kapok, Adult and Child (Jacket Type), Models 3 and 5 ([46 CFR 160.002](#))
- Life Preservers, Fibrous Glass, Adult and Child (Jacket Type), Models 52 and 56 ([46 CFR 160.005](#))

- Buoyant Vest, Unicellular Plastic Foam, Adult and Child ([46 CFR 160.052](#))
- Work Vests, Unicellular Plastic Foam ([46 CFR 160.053](#))
- Life Preservers, Unicellular Plastic Foam, Adult and Child, for Merchant Vessels ([46 CFR 160.055](#))
- Buoyant Vests, Unicellular Polyethylene Foam, Adult and Child ([46 CFR 160.060](#))
- Wearable Marine Buoyant Devices ([46 CFR 160.064](#))
- Immersion Suits ([46 CFR 160.171](#))
- Thermal Protective Aids ([46 CFR 160.174](#))
- Inflatable Life Jackets ([46 CFR 160.176](#))

In addition, lights used on personal flotation devices must be in compliance with [46 CFR 161.012](#).

The US has mutual recognition agreements with the European Union, the European Free Trade Association Countries that are part of the European Economic Area, and the United Kingdom. Regulations concerning Coast Guard approvals under the mutual recognition agreement can be found at [46 CFR 159.003](#).

For additional information, see USCG's:
[Personal Flotation Devices & Lights](#)
[Exposure Suits and Thermal Protective Aids](#)
[Mutual Recognition Agreements](#)

3.8. United States Department of Agriculture (USDA)

3.8.1. Organic Fibers: Organic Foods Production Act of 1990 (OFPA)

[Title 7, United States Code, Chapter 94, ORGANIC CERTIFICATION, Sections 6501-6523](#)

The USDA regulates the term *organic* as it applies to agricultural products through the National Organic Program (NOP) Regulation, [7 CFR Part 205](#). Raw natural fibers, such as cotton, wool, and flax, are agricultural products and are covered under the NOP crop and livestock production standards. Any textile product produced in full compliance with the NOP regulations, including being certified by an approved third party, may be labeled as NOP-certified organic and display the USDA organic seal. Products produced in accordance with the Global Organic Textile Standard (GOTS) may be sold as organic in the U.S. but may not refer to NOP certification or display the USDA organic seal.

For more detailed information, see USDA's:
[Policy Memorandum - Labeling of Textiles That Contain Organic Ingredients](#)
[National Organic Program Handbook](#)

4. Overview of U.S. State Regulatory Frameworks

A growing number of areas are covered by both state and federal statutes, including consumer protection, employment, and food and drug regulation. (State laws give way to stricter federal laws that address the same issue.) When a state's governor signs a bill, it becomes state law. Once a state has enacted a law, it is the responsibility of the appropriate state agency to create the regulations necessary to implement the law.

5. State Regulatory Authorities and Technical Regulations (Mandatory)

In the U.S., some state laws and regulations are enacted that are more stringent than federal laws. These laws include regulations for products, labeling, packaging, chemical restrictions, etc.

Agency/Organization	Scope
State Authorities Responsible for Weights and Measures	Labeling
Toxics in Packaging Clearinghouse (TPCH)	Packaging
International Association of Bedding and Furniture Law Officials (IABFLO)	Labeling
California Office of Environmental Health Hazard Assessment (OEHHA)	Toxic chemicals
California Bureau of Electronics and Appliance Repair, Home Furnishings and Thermal Insulation (BEARHFTI)	Plumage, flammability of upholstered furniture and bedding
California Department of Consumer Affairs	Made in the USA claims
Connecticut Department of Consumer Protection	Asbestos in children's products
Illinois Department of Public Health	Lead labeling
Minnesota Department of Commerce	Formaldehyde in children's products
Washington Department of Ecology	Lead, cadmium, and phthalates in children's products
Several states	Flame retardants, fur labeling, chemicals of concern

5.1. Packaging and Labeling

5.1.1. UPLR

The Uniform Packaging and Labeling Regulations (UPLR) contained in [*Uniform Laws and Regulations in the areas of Legal Metrology and Engine Fuel Quality, NIST Handbook 130*](#) have been adopted into law in 45 of the 50 U.S. states. The purpose of these regulations is to provide accurate and adequate information as to the identity and quantity of contents of packages so that purchasers can make price and quantity comparisons.

The UPLR requires that consumer packaging bear a label specifying the identity of the commodity; the name and place of business of the manufacturer, packer, or distributor; and the net quantity of contents in terms of weight or mass measure, or numerical count in a uniform location upon the principal display panel.

5.1.2. [Toxics in Packaging Legislation](#)

This model legislation was initially drafted by the Source Reduction Council of the Coalition of Northeastern Governors (CONEG) in 1989. It was developed in an effort to reduce the levels of heavy metals in packaging and packaging components that are sold or distributed throughout the United States. The law is designed to phase out the use and presence of mercury, lead, cadmium, and hexavalent chromium in packaging. The legislation has been successfully adopted by 19 states.

For more detailed information, see [Toxics in Packaging Clearinghouse](#) white paper: [Toxics in Packaging Fact Sheet](#)

5.1.3. Uniform Law Label

Filled apparel sold in the United States requires a special label. Thirty-one states, including California, Massachusetts, New York, Ohio, and Pennsylvania, have established laws requiring the labeling of filled apparel. In order to simplify compliance with the various state labeling laws, the [International Association of Bedding and Furniture Law Officials](#) (IABFLO), an association made up of state officials responsible for the enforcement of bedding, apparel, and textiles laws in their respective states, established a uniform law labeling system to assist manufacturers.

Law labels must describe the filling materials of the article as a percentage of those filling materials by weight, for example, 80% polyurethane foam, 20% polyester fibers. It also specifies that "UNDER PENALTY OF LAW THIS TAG IS NOT TO BE REMOVED EXCEPT BY CONSUMER" when used for apparel. The products requiring law labels in each state vary, as do the labeling requirements. Uniform law labels can be produced to satisfy the different requirements of each state.

Law labels are also required in most states to display a Uniform Registry Number which identifies the manufacturing facility that produced the product. This can be any company in the world whose products are sold in the United States. A law label may NOT be combined with another label. However, it is acceptable to have a bold black line between a law label and the California flammability label (printed side-by-side to show as two separate labels).

For more detailed information, see IABFLO's: [Filled Clothing](#) American Law Labels white paper: American Law Label, Inc. (includes applicable products and exemptions)

5.2. State of California

5.2.1. Lead and Other Toxic Substances

California regulates lead and numerous other substances and chemicals through their Safe Drinking Water and Toxic Enforcement Act of 1986, more popularly known as Proposition 65 or Prop 65 ([California Health and Safety Code, Section 25249.6, et seq.](#)) There have been several settlements related to chemicals such as lead, DEHP (phthalates), and flame retardants in apparel and textiles. These settlements provide guidelines for suggested limits. [Prop 65's List of Hazardous Substances](#) is maintained and updated as new chemicals are identified.

The following warning language is required on products sold in California if they contain chemicals on the Proposition 65 list and the amount of exposure caused by the product is not within defined safety limits:

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

For more detailed California official information on Proposition 65, see:
[Office of Environmental Health Hazard Assessment \(OEHHA\)](#)
[Proposition 65 in Plain Language](#)

5.2.2. Safer Consumer Products Regulations

The [Safer Consumer Product Regulations](#) apply to all consumer products placed in the stream of commerce in California. It requires manufacturers or other responsible entities to seek safer alternatives to harmful chemical ingredients in widely used products. The Regulations require the Department of Toxic Substances to adopt regulations that will establish a process for identifying and prioritizing chemicals in consumer products and establish a process for evaluating chemicals of concern in consumer products and their potential alternatives.

For more detailed information, see
[What are the Safer Consumer Products Regulations?](#)

5.3. State of Illinois

5.3.1. Lead

[Public Act 097-0612, The Lead Poisoning Prevention Act](#)

The Act makes it illegal to sell or give away any lead-bearing substance that may be used by the general public unless it bears a warning statement as prescribed below or as prescribed by any other federal regulation. The statement shall be located in a prominent place on the item or package ([16 CFR 1500.121](#)).

If no regulation is prescribed, the warning statement shall be as follows when the lead-bearing substance is a lead-based paint or surface coating:

"WARNING-CONTAINS LEAD. MAY BE HARMFUL IF EATEN OR CHEWED. See Other Cautions on (Side or Back) Panel. Do not apply on toys, or other children's articles, furniture, or interior or exterior exposed surfaces of any residential building or facility that may be occupied or used by children. KEEP OUT OF REACH OF CHILDREN."

If no federal regulation is prescribed, the warning statement shall be as follows when the lead-bearing substance contains lead-based paint or a form of lead other than lead-based paint:

"WARNING: CONTAINS LEAD. MAY BE HARMFUL IF EATEN OR CHEWED. MAY GENERATE DUST CONTAINING LEAD. KEEP OUT OF REACH OF CHILDREN."

The warning statements do not apply to any product for which federal law governs warning in a manner that preempts state authority.

6. Overview of the U.S. Voluntary Standards Framework

The U.S. system of standards development is driven by the private sector. Most U.S. standards are voluntary and developed through consensus methods that reflect the needs of producers and manufacturers, users and consumers, and the government. The [American National Standards Institute](#) (ANSI) (a non-governmental, not-for-profit organization) coordinates much of the private sector activities of the voluntary standards development community in the U.S. There are hundreds of voluntary standards developing organizations in the United States responsible for standardization in many different industries and business sectors. The National Institute of Standards and Technology (NIST), a bureau within the U.S. Department of Commerce, is the national metrology laboratory for the United States. NIST provides the technical measurement infrastructure to support global trade and the commercial measurement system. NIST, through its Standards Coordination Office, advises on and coordinates federal participation in standards setting.

7. Standards Developing Organizations (SDOs)

7.1. [ASTM International](#)

100 Barr Harbor Drive
P.O. Box C700
West Conshohocken, PA 19428-2959 USA
Telephone: + 1.610.832.9500

ASTM International (ASTM) develops and maintains consensus standards and test methods pertaining to personal protective equipment.

The ASTM Committee responsible for personal protective equipment is Committee F23 on Personal Protective Equipment. There are additional committees that develop PPE standards as it relates to the specific topical area, but the majority fall within F23.

The following ASTM Subcommittees relevant to PPE include:

F23.20	Physical
F23.30	Chemicals
F23.40	Biological
F23.50	PPE Conformity Assessment, Interoperability and Compatibility
F23.60	Human Factors
F23.65	Respiratory
F23.66	US TAG to ISO TC94/SC15 Respiratory Protective Devices
F23.70	Radiological Hazards
F23.80	Flame and Thermal
F23.90	Executive
F23.91	Editorial
F23.95	Planning
F23.96	International Standards Coordination
F23.96.01	US TAG to ISO TC 94/SC13 on Protective Clothing
F23.96.02	US TAG to ISO TC94/SC14 on Fire Fighter Personal Protective Equipment
E34.10	Occupational Safety and Health - Industrial Safety

Examples of ASTM PPE standards include, but are not limited to:

F955-15(2021)	Standard Test Method for Evaluating Heat Transfer Through Materials for Protective Clothing Upon Contact with Molten Substances
F1291-16	Standard Test Method for Measuring the Thermal Insulation of Clothing Using a Heated Manikin
F1301-18	Standard Practice for Labeling Chemical Protective Clothing
F1342/F1342M-05	Standard Test Method for Protective Clothing Material Resistance to Puncture
F1494-14	Standard Terminology Relating to Protective Clothing
F1818-15	Standard Specification for Foot Protection for Chainsaw Users
F2733-21	Standard Specification for Flame-Resistant Rainwear for Protection Against Flame Hazards
F2961-22	Standard Test Method for Characterizing Gripping Performance of Gloves Using a Torque Meter
F3502-21	Standard Specification for Barrier Face Coverings
E2875/E2875M-12(2021)	Standard Guide for Personal Protective Equipment for the Handling of Flat Glass

7.2. [International Safety Equipment Association \(ISEA\)](#)

1101 Wilson Boulevard, Suite 1425
Arlington, VA 22209-1762
Telephone +1.703.525.1695

ISEA is a developer of ANSI-accredited consensus standards focused on safety. ISEA standards that are incorporated by reference into Regulations are mandatory.

[ISEA standards](#) include, but are not limited to:

- American National Standard for Industrial Head Protection
- American National Standard for High-Visibility Safety Apparel
- American National Standard for Limited-Use and Disposable Coveralls – Size and Labeling Requirements
- American National Standard for Performance and Classification for Impact-Resistant Gloves
- American National Standard for Occupational and Educational Eye and Face Protection Devices
- American National Standard for High-Visibility Safety Apparel

7.3. [National Fire Protection Association \(NFPA\)](#)

1 Batterymarch Park
Quincy, Massachusetts 02169-7471
Telephone +1.617.770.3000

NFPA is a global non-profit organization dedicated to fire and electrical safety. NFPA delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach, and advocacy.

National Fire protection codes and standards include, but are not limited to:

<u>NFPA 1970</u>	Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel and Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services, and Personal Alert Safety Systems (PASS)
<u>NFPA 1971</u>	Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
<u>NFPA 1951</u>	Standard on Protective Ensembles for Technical Rescue Incident
<u>NFPA 1977</u>	Standard on Protective Clothing and Equipment for Wildland Fire Fighting and Urban Interface Fire Fighting
<u>NFPA 1999</u>	Standard on Protective Clothing and Ensembles for Emergency Medical Operations

8. Testing and Certification Bodies

8.1. Testing

Apparel

For apparel, see the list of [Labs Recognized by the CPSC](#). Labs can be located by searching by product (e.g., apparel) or by scope (e.g., 16 CFR Part 1611, Flammability of Plastic Vinyl Film).

Numerous laboratories test apparel and textiles to recognized industry standards; some may be accredited. A listing of accredited testing laboratories can be found at [A2LA Listing of Accredited Labs by Test](#). [Listings of other testing laboratories can be found in the ASTM Directory of Testing Laboratories](#). Search on the keyword 'apparel and textiles' or on a specific ASTM standard.

Flotation Devices

To find the accepted independent laboratories for equipment approval, visit the USCG's [Accepted Independent Laboratories](#).

8.2. Certification

Consumer Product Safety Improvement Act of 2008 (CPSIA)

[Section 102](#) of the CPSIA requires every manufacturer or importer of all consumer products that are subject to a consumer product safety rule enforced by the CPSC to issue a certificate stating that the product complies with the applicable standard, regulation, or ban. The certificate must accompany the product and be furnished to the retailer or distributor. Section 102 also requires the manufacturers or importers of children's products (age 12 years or younger) to certify that the products comply with all relevant product safety standards by issuing a children's product certificate supported by tests performed by a CPSC-accepted third-party testing laboratory.

9. Relevant U.S. Government Agencies

9.1. [Consumer Product Safety Commission \(CPSC\)](#)

4330 East West Highway
Bethesda, MD 20814 USA
Telephone: +1.301.504.7923
[Email Online Form](#)

CPSC Office

Office of International Programs and Intergovernmental Affairs
Office of Compliance and Field Operations
Office of Import Surveillance

Telephone

+1.301.504.7071
+1.301.504.7915
+1.301.504.7677

9.2. [Customs and Border Protection \(CBP\)](#)

1300 Pennsylvania Avenue, NW
Washington, D.C. 20229 USA
Telephone: +1.703.526.4200
[Email Online Form](#)

9.3. [Environmental Protection Agency \(EPA\)](#)

Imports Program
2000 Traverwood Drive
Ann Arbor, MI 48105 USA
Telephone: +1.734.214.4100
Fax: +1.734.214.4676
[Contact/Ask A Question](#)

9.4. [Federal Trade Commission](#)

600 Pennsylvania Avenue, NW
Washington, DC 20580
Telephone: +1.202.326.2222
[Contact the FTC](#)

9.5. [National Institute for Occupational Safety and Health \(NIOSH\)](#)

Patriots Plaza 1
395 E Street, SW, Suite 9200
Washington, DC 20201
Telephone: 1800-232.4636
[List of Contacts](#)

9.6. [Occupational Health and Safety Administration \(OSHA\)](#)

200 Constitution Ave NW
Washington, DC 20210
Telephone: +1.800.321.6742
[Contact OSHA](#)

9.7. [U.S. Department of Agriculture](#)

1400 Independence Avenue, SW
Washington, DC 20250
Telephone: +1.202.720.2791
[Contact USDA](#)

10. U.S. PPE Industry and Market Data

10.1. Industry Trade Associations

[International Safety Equipment Association](#)

1101 Wilson Boulevard, Suite 1425
Arlington, VA 22209-1762
Phone: 703-525-1695

[National Fire Protection Association](#)

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