



ANSI/ISEA 107-2004: An Overview

The American National Standard for High-Visibility Safety Apparel (ANSI/ISEA 107-2004) is the standard established by the American National Standards Institute, Inc.

ANSI/ISEA 107-2004 is a voluntary industry consensus standard that specifies the requirements for high visibility safety apparel and represents a revision to the 1999 version. Before the first publication of this standard in 1999 there was no regulation or guideline for the design and performance of materials for high visibility safety apparel in the U.S. Since 1999, private industry as well as various federal, state, and local authorities has recognized this standard.

Significant changes to the first edition (ANSI/ISEA 107-1999) include recognition of headwear as high visibility accessory products, the distinction between woven and knitted fabrics as background material, and removal of previous test criteria that added no value. The appendices have been expanded to include additional examples of garment designs and now include forms for standard test reports and an apparel and headwear compliance certificate.

This document, ANSI/ISEA 107-2004: An Overview, summarizes the main changes to the first edition of the standard and is intended to assist you with the task of writing a garment specification based on the provisions of ANSI/ISEA 107-2004. You should obtain a copy of the standard and refer to it when more detailed information is required.

ANSI/ISEA 107-2004: WHAT HAS CHANGED

Definitions

The list of definitions has been expanded providing a clearer definition for combined-performance material, which now counts toward the total calculation of exposed background material. Definitions for accredited laboratory, high visibility headwear, and shorts have also been added.

Types, Classes and Colors

A new section on garment types, classes, and colors has been added. Distinctions among the garment classes are more clearly described. Garments that protect the torso, such as safety vests, and t-shirts are intended to meet Class 1 or Class 2 requirements. Shorts have been added to the description of Class E garments, and Table 1 has been revised to include Class E garments and headwear minimum areas.



Design Requirements and Examples

The minimum area requirement, retroreflective brightness levels, and retroreflective minimum band widths per garment class have not changed. Retroreflective patterns, such as logos, design icons, or identification text may contribute to the minimum area requirements specified in Table 1. Clearer descriptions of garment design requirements have been added (e.g., 6.1.5 “Gaps to Enable Fastening”; 6.1.6 “Contiguous 360° Visibility”). While use of high visibility headwear is not required, if labeled as compliant, high visibility headwear must meet the requirements of Table 1. An Appendix C has been added and includes examples of Class E (shorts) and headwear designs.

Requirements for Retroreflective and Combined-Performance Materials

The minimum values for Table 6 (Level 1) have been lowered for 1° and 1°30' observation angles to allow for more flexibility.

Garment Markings

As with the previous edition of the standard, the markings must be large enough to clearly convey recommended care guideline, name of manufacturer, product type, size, and description. With the new edition, no size designation or pictogram is required for headwear.

Compliance Documentation and Certification

Component manufacturers must provide certificates of compliance and test reports using the forms in Appendix D. Certificates and test reports must also be retained by the garment manufacturer and made available upon request. Garment manufacturers must also self-certify or third party certify garments using the forms in Appendix D6.

HOW TO OBTAIN COPIES OF THE NEW ANSI STANDARD

Access an order form by visiting the ISEA website at “safetyequipment.org”, or request order information by sending a letter or note to the following address:

International Safety Equipment Association

1901 N. Moore Street

Arlington, VA 22209

Tel: 703-525-1695

Fax: 703-528-2148

Email: isea@safetyequipment.org