

INTRODUCTION TO THE ANSI HI-VISIBILITY STANDARD



The American National Standard for High-Visibility Safety Apparel and Headwear (**ANSI/ISEA 107-2010**) is a standard established by **AMERICAN NATIONAL STANDARDS INSTITUTE** for protection of construction, maintenance, utility, emergency responders, airport ramp personnel and other workers who are routinely exposed to the hazards of low visibility while on the job. Private industry, various federal, state, and local authorities have embraced ANSI/ISEA 107 compliant garments and headwear as useful PPE for workers exposed to struck-by-hazards.

This standard provides guidelines for the selection and use of high-visibility safety apparel such as shirts, rainwear, outerwear, safety vests and headwear to improve worker visibility during the day, in low-light conditions and at night.

The **ANSI/ISEA 107-1999** standard was the first U.S. standard for the design and performance of materials for high-visibility safety apparel.

ANSI/ISEA 107-1999 SPECIFIES THE FOLLOWING CRITERIA MUST BE MET:

- Design
- Requirements for Background and Combined-Performance Retro-reflective materials
- Photometric and Physical Performance Requirements for Retro-reflective materials
- Care labeling



FINAL RULE

The Final Rule, 23 CFR Part 634 Worker Visibility, was passed on November 18, 2006 and took effect on November 24, 2008.

The Rule states that all workers within the right-of-way of a Federal-aid highway who are exposed to traffic or to construction equipment within the work area shall wear High-Visibility apparel that must meet Performance Class 2 or Class 3 requirements of ANSI/ISEA 107-2004.

The Federal Register Final Rule and revised document of the 2009 Manual on Uniform Traffic Control Devices (MUTCD) was released on December 16, 2009.

The Rule states that mandatory use areas are expanded beyond Federal-aid highways and will require all workers on or near the roadway right-of-way to wear High-Visibility safety apparel that meets performance Class 2 or Class 3 of ANSI 107-2004 or equivalent revisions (ANSI 107-2010).

The amount of background and reflective material remains unchanged for all 107 Classes. However, a Class 1 or a Class 2 garment must now have reflective material in the shoulder area. The objective of this change was to provide greater visibility when a worker is bending over, or at angles that could be potentially missed on a garment without “vertical” reflective material over the shoulders.

Phase-in for compliance on all public roads which are not Federal-aid highways ending on December 31, 2011.

ULTRAVIOLET PROTECTION FACTOR (UPF) RATING

A relatively new rating designation for sun protective textiles and clothing is UPF (Ultraviolet Protection Factor). Unlike SPF (Sun Protection Factor) that measures only UVB, UPF measures both UVA and UVB.

Sun protective clothing is clothing specifically designed for sun protection and is produced from a fabric rated for its level of ultraviolet (UV) protection. Sun protective clothing may be pre-treated with UV inhibiting ingredients during manufacture to enhance UV blocking capacity.

BE SURE TO LOOK FOR THE UPF 40 ICON TO SEE WHICH RED KAP PRODUCTS MADE FROM FABRIC THAT CAN HELP PROTECT YOU FROM HARMFUL UV RAYS.

UPF Rating based upon testing performed on dry fabric, prelaundered.
Test data available upon request.



CLASSIFICATIONS

ANSI/ISEA 107-2010 COMPLIANT SAFETY GARMENTS ARE CLASSIFIED AS FOLLOWS:

HI-VISIBILITY

CLASS	LEVEL
2	2

CLASS 2 GARMENTS – intended for use in activities where greater visibility is necessary during inclement weather conditions or in work environments with risks that exceed those for Class 1. Garments in this class also cover workers who perform tasks that divert their attention from approaching traffic, or that put them in close proximity to passing vehicles traveling at 25 mph or higher.

- Forestry operations
- Ship cargo loading operations
- Roadway construction
- Utility and railway workers
- School crossing guards
- Delivery vehicle drivers
- High-volume parking and toll gate personnel
- Airport baggage and handlers / ground crew
- Emergency response and law enforcement
- Trash collection and recycling operations

HI-VISIBILITY

CLASS	LEVEL
3	2

CLASS 3 GARMENTS – provide the highest level of visibility, and are intended for workers who face serious hazards, such as nighttime work, and often have high task loads that require attention away from approaching vehicle traffic. Garments for these workers should provide enhanced visibility to more of the body, such as arms and legs.

- Roadway construction personnel and flaggers
- Utility workers
- Survey crews
- Emergency response personnel

HI-VISIBILITY

CLASS	LEVEL
E	2

CLASS E GARMENTS – waistband trousers, bib overalls and shorts that meet all minimum requirements for retro-reflective and background materials, except for minimum area and placement required for Performance Class 3, 2 or 1 shall be designated Class E. Class E apparel is not intended to be worn without Performance Class 2 or 3 apparel. When Class E trousers are worn with Performance Class 2 or Class 3 apparel, the overall classification for the ensemble shall be Performance Class 3.

DISCLAIMER: Decisions regarding the use of protective apparel should be made by a qualified safety professional. VF Imagewear, Inc. manufactures these products to the referenced specifications and does not make any representation or warranty as to their suitability or fitness for any particular use.