

## ANSI/ISEA107-2004 Q & A

*What is the ANSI Standard?*

On June 1 1999, a new standard for High-Visibility Safety Apparel was established. On September 15, 2004 the standard was revised and is currently entitled ANSI/ISEA 107-2004. This important standard is the authoritative and oftentimes required guide for specification, design, performance and use of high visibility garments. Companies should always refer and adhere to the standard when planning and specifying their line of safety apparel including vests, jackets, pants, coveralls and harnesses.

*Is the ANSI standard required?*

Some states, DOT's and municipalities require you to comply with the ANSI standard. In addition, the Manual of Uniform Control and Traffic Devices (MUTCD) provides specific language that mandates compliance. The MUTCD is published by the Federal Highway Administration (FHWA).

*What does the MUTCD say and where do I find the information?*

*There are two sections in the MUTCD that reference the ANSI standard. The first is "flaggers ruling" and the second is "Workers Considerations"*

*What does it say about flaggers?*

**For daytime and nighttime activity, flaggers shall** wear safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel" and labeled as **meeting the ANSI 107-1999 standard performance for Class 2 risk exposure**. The apparel background (outer) material shall be either fluorescent orange-red or fluorescent yellow-green as defined in the standard. The retro reflective material color shall be either orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 300 m (1,000 ft). The retro reflective safety apparel shall be designed to clearly identify the wearer as a person.

WWW.MUTCD.FHWA.DOT.GOV

MUTCD 3003 EDITION PART 6 CHAPTER 6E.

Section 6E. 02

*What does it say about Workers Consideration?*

Worker Safety Apparel— **all workers exposed to the risks of moving roadway traffic or construction equipment should** wear high-visibility safety apparel meeting the requirements of ISEA “American National Standard for High-Visibility Safety Apparel” or equivalent revisions, and labeled as ANSI 107-1999 standard performance for Class 1, 2, or 3 risk exposure. **A competent person designated by the employer to be responsible for the worker safety plan within the activity area of the job site should make the selection of the appropriate class of garment.**

WWW.MUTCD.FHWA.DOT.GOV  
MUTCD 3003 EDITION PART 6 CHAPTER 6D.  
SECTION 6D.03

*What does the MUTCD say about Class 3?*

The manual 2003 MUTCD also recommends that flaggers wear Class 3 garments for night-time work, even where the flagger station is illuminated.

*Why should I be concerned with being ANSI compliant?*

Since ANSI’s inception, it has quickly become widely accepted as the best way to protect workers against the extreme hazards of low visibility during daylight and nighttime activities. In addition, ANSI compliant garments enhance the visibility of workers who are exposed to complex backgrounds such as workzones. From a safety standpoint not to mention from a legal and liability standpoint, it is in your best interest to ensure your high-visibility work wear is ANSI compliant.

*How is material or a garment tested to ensure that it is ANSI compliant?*

There are three basic testing requirements for ANSI compliance:

- Background Material:** Material is put through a battery of tests that include brightness, colorfastness, and durability. Material must be 3<sup>rd</sup> party tested for ANSI compliance.
- Reflective Material:** Also put through a battery of tests for retro reflectivity at various angles as well as durability testing. Reflective material must be 3<sup>rd</sup> party tested for ANSI compliance.
- Design:** The completed vest must meet several design elements. 3<sup>rd</sup> party certification is not required for garment design. The manufacturer can self certify that all criteria has been met and therefore label the garment as ANSI/ISEA 107-2004 compliant based on the specific class requirements

*What are the Performance Classes for garments?*

The standard defines several classes of garments

- Classes 1, 2 & 3 typically cover vests, shirts, jackets and coveralls
- Class “E” covers pants and shorts
- The 107-2004 revision includes a new product group called “Headwear”.

### *What is Performance Class 1?*

This class defines the minimum amount of required materials to differentiate the user from the work environment. It is intended for exposure to vehicle and moving equipment speeds not exceeding 25 MPH

#### Class I Examples:

- Workers directing vehicle operators to parking/service locations
- Workers retrieving shopping carts from parking areas
- Workers exposed to hazards from warehouse equipment traffic
- Roadside “right-of-way” or sidewalk maintenance workers
- Delivery vehicle drivers

### *What is Performance Class 2?*

Garments in this class provide superior visibility for wearers by the additional coverage of the torso, and is more conspicuous than Class 1. Garments in this class are intended for persons whose activities require greater visibility and/or during inclement weather conditions

#### *When should Class 2 garments be considered?*

- When complex backgrounds are present
- When employees are performing tasks which divert attention from approaching vehicle traffic
- When vehicles or moving equipment speeds are greater than 25 MPH
- When work activity takes place in closer proximity to vehicle traffic

#### Class 2 Examples

- Roadway construction workers
- Utility workers
- Survey crews
- Railway workers
- Crossing guards
- Parking and/or toll gate personnel
- Airport baggage handlers/ground crew
- Emergency response personnel
- Law enforcement
- Accident site investigators

### *What is Performance Class 3?*

This class of garments offers greater visibility to the wearer in both complex backgrounds and through a full range of body movements. Visibility is enhanced beyond the performance of class 2 through the enhancement of background and reflective materials to the arms and/or legs. **Regardless of the area of materials used, a sleeveless garment or vest alone shall not be considered performance class 3**

*When should Class 3 garments be considered?*

- When workers are exposed to significantly higher vehicle speeds and/or reduced sight distance
- When work and vehicle operators have high task loads, clearly placing workers in danger
- When the wearer must be conspicuous through the full range of body motions at a minimum of 1280 feet, and must be identifiable as a person.

Class 3 Examples

Examples:

- Roadway construction personnel
- Utility workers
- Survey crews
- Emergency response personnel
- Flagging crews

*What's new for the 107-2004 Standard*

- Class 3 is no longer available in a traditional vest
  - New category includes High-Visibility Headwear
  - Updated testing procedures for knitted (mostly meshes) background material and eliminated procedures that added no value.
  - User guidance has been expanded
- Appendixes now include standard test reports and compliance certificates.

*To be ANSI/ISEA 107-2004 compliant, there are a lot of considerations. What else should I be aware of?*

- A Risk Assessment should be made by a qualified representative prior to exposing workers to dangerous working conditions
- Fog, rain, low light conditions all play a part in determining what class a workers falls into.
- Be diligent in choosing the right garment for your workers!!

*Where do I find more information on the ANSI standard?*

Go to: <http://www.safetyequipment.org/hivisstd.htm>