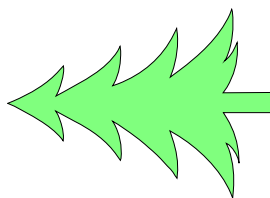


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Safety Apparel in Work Zones: *Is a Class 2 vest good enough??*



The 2009 Edition of the Manual on Uniform Traffic Control Devices (MUTCD) contains a whole new section on the latest industry standards for high visibility apparel for workers and flaggers in work zones on public roads. Worker visibility and safety is the ultimate goal.

Up to late 2009, the 2003 Edition of the MUTCD stated under “Worker Safety Considerations” that “workers exposed to the risks of moving roadway traffic or construction equipment should wear high-visibility safety apparel meeting the ANSI/ISEA 107-1999 Standard for High-Visibility Safety Apparel for risk exposure Class 1, 2 or 3.” The section also called for a competent person responsible for the job site’s worker safety plan to make the selection of the appropriate class of garment.

Worker Apparel

As of late 2009, all workers, including emergency responders, within the right-of-way who are exposed either to traffic (vehicles using the highway for purposes of travel) or to work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 publication or equivalent revisions, and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. A person designated by the employer to be responsible for worker safety shall make the selection of the appropriate class of garment.

Flagger Apparel

The 2009 MUTCD in Section 6E.02, “High Visibility Safety Apparel”, now states “for daytime and nighttime activity, flaggers shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 publication . . . and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. The apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person.

Buy the Right Stuff

Employers should consider these standards when they are purchasing products now. In the 2000's, a high number of national fatalities in highway work zones was a sign that the recommendations for Worker's Safety and Worker Safety Apparel needed to be more specific. These changes to the Worker Safety Section of the MUTCD clearly define minimum performance requirements for high visibility safety apparel. Employers now have an ANSI Standard to use when specifying their high visibility safety apparel.

The ANSI 107 Standard defined three classes of garments depending on the level of protection required. Class 3 offers the highest level of protection. Class 2 provides superior visibility and is more conspicuous than Class 1.

The classes of garments are based on minimum areas of two elements: retroreflective materials and background materials. When combined, these two elements greatly enhance the visibility of the wearer in day and night. Both the retroreflective material and background material must have a test report from a third party testing laboratory stating compliance with the ANSI 107 Standard. These documents must be made available to end users if requested. All classes shall have retroreflective material placed to provide a 360° visibility of the wearer.

The right garment

The right class of garment to use is a decision that must be made by each employer depending on the risks their workers are encountering on the job. It is up to the employer to determine, for example, the difference in risk level between a paving job on a busy two-lane roadway and a sealing job in a closed parking lot. There are guidelines in Appendix B of the Standard to help in the selection of the class of garment. The class recommendations in the appendix are meant to be based on the highest intermittent or continuous exposure of the worker. More complex job sites, high worker task loads, and high traffic speeds call for higher classes of garments. At great distances and speeds, the human form should be easily distinguished from cones, drums, signs, and other traffic control devices.

Here are a few of the issues from the appendix to consider when making decisions about specifying garments.

CLASS 1: (requires at least 155 sq. inches of reflective trim on at least 217 sq. inches of background material)

Conditions:

- Low-speed areas having vehicles moving less than 25 mph
- Work backgrounds are not complex
- Activities permit full attention to traffic

Examples:

- Warehouse workers
- Delivery vehicle drivers
- Shopping cart retrievers
- Parking lot attendees
- Sidewalk or roadside maintenance workers

CLASS 2: (requires at least 201 sq. inches of reflective trim on at least 775 sq. inches of background material)

Conditions:

- Complex backgrounds
- Tasks that divert attention from traffic
- Activities taking place in or close to traffic
- Speeds greater than 25 miles per hour
- Inclement weather

Examples:

- Utility workers
- Roadway construction workers
- School crossing guards
- Emergency response personnel
- Survey crews
- Law enforcement and accident site investigators

CLASS 3: (requires at least 310 sq. inches of reflective trim on at least 1240 sq. inches of background material)

Conditions:

- Significantly higher vehicle speeds and/or reduced sight distances
- High task loads that divert attention from traffic
- Full body motions conspicuous at over 1280 feet

Examples:

- Roadway construction workers
- Law enforcement
- Utility/survey workers
- Emergency response personnel
- Flagging crews

The last thing to keep in mind when purchasing high visibility safety apparel is to look for the ANSI 107 Label.

The standard requires the manufacturer to attach a label that clearly states the name of the manufacturer, size of the garment, maximum number of wash cycles, care instructions if applicable, and a pictogram showing both the class of garment and level of retro-reflective material performance.

The ANSI 107-1999 Standard is available from the International Safety Equipment Association; 1901 N. Moore Street, Arlington, Virginia, 22209; 703-525-1695 or on the Web at www.safetyequipment.org