

Safety Apparel in Work Zones:

Is a Class 2 vest good enough??



The 2003 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 now, the Millennium Edition of the MUTCD stated under “Worker Clothing” that it is recommended that “workers close to the motor vehicle traveled way should wear bright, highly visible clothing”.

Section 6D.03 B of the 2003 MUTCD, Worker Safety Apparel, now recommends that all workers exposed to moving roadway traffic or 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 calls for a competent person responsible for the job site’s worker safety plan to make the selection of the appropriate class of garment.

Flagger control

The 2003 MUTCD in Section 6E.02, “High Visibility Safety Apparel”, now states “for daytime and night-time activity, flaggers shall wear safety apparel meeting the requirement...of the ANSI 107-1999 standard performance for Class 2 risk exposure”.

This section further recommends that for night work, safety apparel meeting the ANSI 107 Class 3 risk exposure be considered.

The 2000 Edition of the MUTCD, section 6E.02, just required safety garments to be a “vest, shirt, or jacket of either orange, yellow, yellow-green, or a fluorescent version of these colors for daylight use and retroreflective for night work.... and shall be visible at a minimum distance of 300 m (1,000 ft).

Get ready now

Although the MUTCD's target for implementation for both the Worker Safety and Flagger Control requirements is December of 2006, employers should consider these standards when they are purchasing products now.

Clearly the increase in the number of national fatalities in highway work zones over the past five years, from 782 in 1998 to 1,181 in 2002, 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.

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 recommendations 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)

Conditions:

- Low-speed roadways.
- Work backgrounds are not complex.
- Activities permit full attention to traffic.
- Primarily off the right-of-way activities.

Examples:

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

Class 2: (requires at least 201 sq. inches of reflective trim)

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.
- Emergency response personnel.
- Survey crews.
- Law enforcement.

Class 3: (requires at least 310 sq. inches of reflective trim)

Conditions:

- High task loads that divert attention from traffic.
- Full body motions conspicuous at over 1280 feet.
- High-speed roadways: greater than 50 miles per hour.
- Identification of the human form desired.

Examples:

- Law enforcement.
- Utility workers.
- Emergency response personnel.
- Roadway construction workers.

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.safetysafetyequipment.org