

## High-Visibility Safety Apparel and Headwear

**F**ive years ago, the International Safety Equipment Association (ISEA, [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org)) published the first American National Standard (ANSI, [www.ansi.org](http://www.ansi.org)) for high-visibility safety apparel. Garments complying with ANSI/ISEA 107-1999 quickly became widely accepted as the best way to protect workers against hazards of low visibility, and to enhance the visibility of workers who are exposed to struck-by hazards. ANSI has now approved a revised edition—ANSI/ISEA 107-2004—of the first the standard. This is the culmination of several years of work by the ISEA High Visibility Products Group, in cooperation with employers and workers, test labs and material suppliers, safety professionals, and federal, state, and local authorities.

This standard provides a uniform, authoritative guide for the design, performance specifications, and use of high-visibility and reflective apparel including vests, jackets, bib/jumpsuit coveralls, trousers, and harnesses. Garments that meet this standard can be worn 24 hours a day to provide users with a high level of conspicuity through the use of combined fluorescent and retroreflective materials.

The revised version of the standard expands the product coverage to include high-visibility headwear. It also contains additional testing procedures for knitted fabrics used as background material, and eliminates tests from the previous edition that added no value. User guidance has been expanded to provide occupational scenarios and recommended Performance Classes and additional examples of garment design, and the appendixes now include standard test

reports and a compliance certificate.

ANSI/ISEA 107 was developed by ISEA in response to concerns that American workers who are exposed to low visibility hazards are not wearing appropriate visibility-enhancing apparel. "There's been a lot of progress since the standard first appeared," says Cristine Fargo, manager, standards programs. "People driving through highway work zones can immediately see the advances in product design—the workers are more visible."

"The revision doesn't change the basic requirements of the standard



such as garment dimensions, color, or materials performance, with the exception of clarifying the prohibition of any kind of sleeveless garment to be labeled Class 3 when worn alone," explained ISEA Technical Director Janice Comer Bradley. "The standard has been expanded to keep up with the state of the art in fabrics technology and design, and now provides users with documentation that a garment meets all the requirements of the standard."

The standard establishes three Performance Classes for high-visibility safety apparel based on the wearer's activities, and determined by the total area of background and reflective materials used.

To comply with ANSI/ISEA 107-2004, a garment's background material, and retroreflective or combined-performance material, must be tested and certified by an independent, accredited third-party laboratory. The manufacturer of the finished item then verifies that the garment or headwear meets all the requirements of the standard, and provides a certificate of compliance for each model. Forms for recording and reporting test results are included in the standard, as is a format for the compliance certificate. These forms are also available online.

All references to classes of garments and their use in specific environments based on vehicle speeds has been removed. This version of the standard emphasizes that garment selection should be based on the color and complexity of the work environment, the task load of the worker, separation of the worker from moving equipment and vehicles, and other work environment variables. Occupational scenarios in an appendix to the standard provide guidance for users.

*ANSI/ISEA 107-2004, American National Standard for High-Visibility Safety Apparel and Headwear*, can be purchased from ISEA for \$60 a copy. Discounts are available for ISEA members and bulk purchasers. For more ordering information, contact Sabra Flaherty, [sflaherty@safetysafetyequipment.org](mailto:sflaherty@safetysafetyequipment.org), or visit [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org). 