



TECHNICAL BULLETIN: ANSI/ISEA 107-2015 HI-VIS STANDARD RELEASED

NEW STANDARD ADDS “TYPES” TO GARMENT DESCRIPTIONS, COMBINES THE ANSI/ISEA 107 AND 207 STANDARDS, AND ADDS A “SMALLEST SIZE” OFFERING.

On February 1, 2016, ANSI (American National Standards Institute, Inc.) approved the ISEA (International Safety Equipment Association) revision of the 107 Standard for High-Visibility Safety Apparel (HVSA) and Accessories. As with previous versions, the updated standard – ANSI/ISEA 107-2015 – sets the basic guidelines and minimum requirements for hi-visibility apparel. There are a few major changes and noteworthy differences in the 2015 version explained below.

COMBINATION OF ANSI/ISEA 107 STANDARD AND 207 STANDARD

The revised 2015 standard consolidates the requirements of ANSI/ISEA 107 and ANSI/ISEA 207 (American National Standard for Public Safety Vests) to establish a single comprehensive standard for all HVSA. While ANSI/ISEA 207-2011 outlined requirements for public safety vests only, ANSI/ISEA 107-2015 does not restrict garments intended specifically for public safety personnel to just vests, but rather, includes a Class 2 and Class 3 Performance Class. ANSI/ISEA 207-2011 will not be revised and will be formally withdrawn by ISEA in the near future. Which brings us to the second important change to ANSI/ISEA 107-2015: the addition of specific garment types.

GARMENT TYPES

The ANSI/ISEA 107-2015 Standard now includes Garment Types in its commonly referenced Table 1 (*see chart on next page*). This chart explains the Garment Types, Performance Classes, and minimum areas of visible materials necessary for each category. Type descriptions will help workers choose the proper garment to wear based on expected usage and anticipated work activities. Type R describes garments used for roadway and temporary traffic control; Type O for off-road and non-roadway use; and Type P for public safety activities. Garments such as pants, overalls, shorts, rain pants, and gaiters are now referred to as supplemental items and can be used across any of these applications.

Each Garment Type features one or more Performance Classes. Performance Classes will be familiar to those acquainted with previous versions of ANSI/ISEA 107. For example, a Performance Class 2 vest – the most common HVSA garment used in roadway work – is now referred to as a Type R Performance Class 2 garment. Type R also contains a Performance Class 3. Performance Class 1 garments found in previous standard versions are now classified as Type O Performance Class 1. Users will also note the addition of Performance Class 2 and

Performance Class 3 to Type P Public Safety garments. No Performance Classes existed previously in ANSI/ISEA 207-2011.

Table 1. Minimum Areas of Visible Materials				
Garment Type	Performance Class	Background Material	Retroreflective or Combined Performance Materials	Minimum Width Reflective Material
Type O Off-road and Non-Roadway Use	Class 1	0.14 m ² (217 in ²)	0.10 m ² (155 in ²)	25 mm (1 in.)
Type R Roadway and Temporary Traffic Control Zones	Class 2*	0.50 m ² (775 in ²)	0.13 m ² (201 in ²)	25 mm (1 in.) ^{##} 35 mm (1.38 in)
	Class 3**	0.80 m ² (1240 in ²)	0.20 m ² (310 in ²)	25 mm (1 in.) ^{##} 50 mm (2 in)
*For the smallest size offered in Type R, Performance Class 2, a minimum of 0.35 m ² (540 in ²) of background material may be used to accommodate small-sized workers. All subsequent larger sizes must use 0.50 m ² (775 in ²). ** For the smallest size offered in Type R, Performance Class 3, a minimum of 0.65 m ² (1000 in ²) of background material may be used to accommodate small-sized workers. All subsequent larger sizes must use 0.80 m ² (1240 in ²).				
Type P Emergency and Incident Responders, and Law Enforcement Personnel	Class 2	0.29 m ² (450 in ²)	0.13 m ² (201 in ²)	25 mm (1 in.) ^{##} 50 mm (2 in)
	Class 3	0.50 m ² (775 in ²)	0.20 m ² (310 in ²)	25 mm (1 in.) ^{##} 50 mm (2 in)
Supplemental Items[#] Pants, Overalls, Shorts, Rain Pants, and Gaiters	Class E	0.30 m ² (465 in ²)	0.07 m ² (109 in ²)	25 mm (1 in.) ^{##} 50 mm (2 in)
[#] When a Supplemental Class E item is worn with Performance Class 2 or 3, the overall classification for the ensemble shall be Performance Class 3. ^{##} For use with split-trim designs NOTE: Combined performance materials can be counted toward the minimum area requirements for background material specified in Table 1.				

SMALLEST SIZE OFFERED EXCEPTION

In response to end user feedback regarding sizing for smaller workers, the new standard allows for an exception to the minimum area requirements for background materials used in Type R Performance Class 2 and Type R Performance Class 3 garments in the form of a “smallest size” offering. The revised standard stresses that only the smallest size offered can deviate from the stated minimums, and the configuration and design of the garment must be consistent with the other larger sizes of that garment.

Type R Performance Class 2 in the smallest available size is allowed to have as little as 540 square inches of background material (vs. 775 square inches) and a Type R Performance Class 3 garment is allowed to have 1,000 square inches of background material (vs. 1,240 square inches). The reflective material minimum area requirements remain 201 square inches for Performance Class 2 garments and 310 square inches for Performance Class 3 garments. All subsequent larger sizes must meet the minimum background material area requirements of the respective performance classes stated in the standard.

BALANCED DESIGN REQUIREMENT

HVSA compliant with the updated ANSI/ISEA 107- 2015 Standard is required to be balanced in design so that no less than 40% of the minimum required amount of reflective and background

material is present on both the front and back when laid flat. This new design requirement ensures garments provide visibility of the worker from either side: front or back.

ADDITIONAL CHANGES TO NOTE

- The ANSI/ISEA 107-2015 standard adds minimum material requirements for accessory items such as arm bands and headwear with new labeling requirements.
- Headwear is now classified as accessory, instead of as a separate Performance Class.
- Gaiters are now allowed as a Supplemental item in Performance Class E.
- All HVSA labeling must be updated to include Garment Type.
- Elimination of Level 1 reflective; all reflective materials used in an ANSI/ISEA 107-2015 compliant HVSA must meet the performance requirements of what was previously known as Level 2. Simply put, there are no longer reflective performance levels, just a single set of performance requirements.
- All garments not meeting one of the FR requirements found in Sec. 10.5 must state “This garment is not flame-resistant as defined by ANSI/ISEA 107-2015 Section 10.5.”

REGULATORY UPDATE

The most current Manual on Uniform Traffic Control Devices (MUTCD), which is published by the Federal Highway Administration (FHWA) and is the federal law for all things road-related, was published in 2009. Since the ANSI 107-2010 standard was not yet published in 2009, which is the most current version of the MUTCD, this document states that workers must wear ANSI/ISEA 107-2004 Performance Class 2 or Class 3 apparel. When the 2010 standard was published, the FHWA issued a letter of interpretation stating that ANSI/ISEA 107-2010 compliant garments were also appropriate. It is widely expected that the FHWA will do the same thing for ANSI/ISEA 107-2015 garments and cite Type R Performance Class 2 or Performance Class 3 garments as acceptable for compliance when working in the right of way on roadways.

GLOWEAR® HI-VIS APPAREL AND THE NEW ANSI 107 REQUIREMENTS

Ergodyne has a long history of involvement in hi-vis garment design and manufacturing. And, through our membership in ISEA, we’ve also long been active in the development and revision of the ANSI 107 standard. This experience has produced an unrivaled level of hi-vis expertise in the PPE industry.

It is important to note - none of the ANSI/ISEA 107-compliant garment designs in Ergodyne’s GloWear® Hi-Vis Apparel line today become “non-compliant” with the new 2015 standard. Although you will begin to see garments labeled to adhere to the new standard, all GloWear® garments labeled to the 2010 standard are still perfectly acceptable for their intended use. In true Ergodyne fashion, we will be making some improvements to our current line along with these changes, so keep an eye out for updated pockets, additional mic tabs, added smaller-sized vests, and other features in 2016.

We are ready to serve and happy to answer any of your hi-vis questions. For more details on the ANSI/ISEA 107 standard or anything regarding hi-vis apparel, please contact Andy Olson at andy.olson@ergodyne.com, Megan Tansom at megan.tansom@ergodyne.com or our customer service team at orders@ergodyne.com. Printed copies of the ANSI-107-2015 standard will be available for purchase through ISEA at <http://www.safetysafetyequipment.org>.