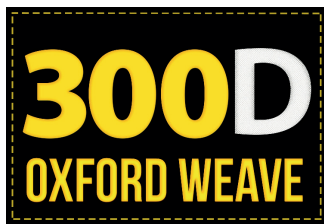




5 USA Industry Leading High Visibility Fabrics



Portwest Glowtex® Triple Technology uses the latest innovation in light emitting technology to ensure the wearer achieves the highest level of protection in high visibility apparel. The revolutionary light emitting Glowtex phosphorescence tape accumulates the light in well lit places and emits light in very low or no light conditions – i.e. it glows in the dark.



Made with **300 Denier** 100% Polyester yarn, this is a tough fabric for tough conditions. 300D fabric has superb abrasion and tear resistance. The polyurethane (PU) coating on the inside makes the fabric durable and waterproof and the outer has a water and stain repellent coating which helps keep the garment clean.



Sealtex® Ultra is a highly breathable, high technology, PU coated fabric bonded to a flexible 100% polyester tricot knit. This 5.5oz Waterproof, Windproof, and breathable fabric will keep you warm and dry in adverse weather conditions. Welded, waterproof seams keep rain and wind out while the durable, anti-fungal, anti-tear, flexible fabric can easily be wiped clean, allowing these garments to look great while lasting longer.



The Portwest range of **Cotton Comfort** garments are manufactured from a fully ANSI/ISEA 107 certified 55% cotton, 45% polyester fabric with cotton on the inside for comfort and polyester on the outside for maximum durability. The cotton/polyester mix ensures that the garment is highly breathable and that a comfortable temperature is maintained at all times.



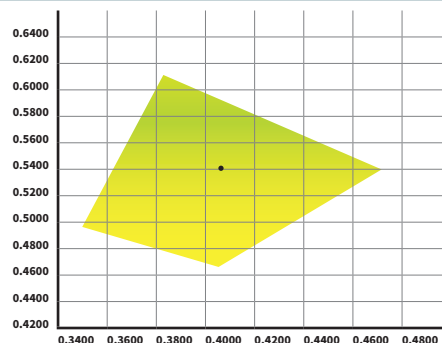
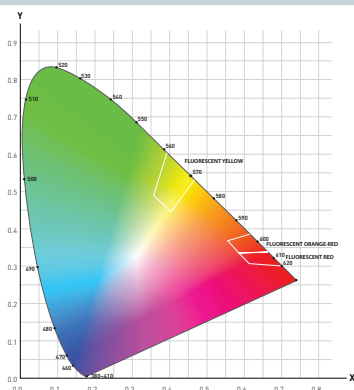
The **Vestport** range incorporates three fabric combinations including 100% Polyester full mesh, solid warp knit and half mesh/half solid. The fabrics are durable, comfortable, highly breathable and certified to the latest ANSI/ISEA 107 standard.

NOTE: Glowtex is a registered trademark of Portwest. Sealtex is a registered trademark of Portwest. VEST-PORT is a trademark of Portwest.



Quality Testing

The cornerstone of our success has always been our stringent quality control. Can you be sure the product you are wearing conforms to ANSI/ISEA 107? A certificate from a test house guarantees that the garment or fabric sent to the test house has attained the ANSI/ISEA 107 standard. It is not a guarantee that the bulk production meets the standard. Therefore, we check every roll of fabric and reflective tape with highly specialized equipment which guarantees all our products achieve the ANSI/ISEA 107 standard.



X= 0.40565 | Y= 0.5397

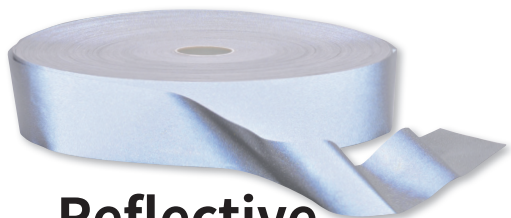
Fabric Testing

In our quality control laboratory we use the Minolta spectrophotometer to check every roll of fabric. This guarantees that the fabric used is fully compliant to the ANSI/ISEA 107 standard.

This graph displays the CIE 1931 X, Y chromaticity diagram which defines a color space for graphing color.

CLOSE-UP VIEW OF FLUORESCENT YELLOW

This graph shows an enlarged view of the yellow ANSI/ISEA 107 color range. The color co-ordinates marked on the graph are a reading from our fluorescent yellow fabric. This reading is taken using the Minolta spectrophotometer.



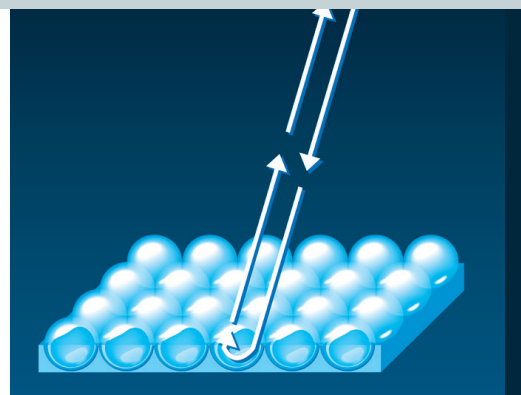
Reflective Tape Testing

We take pride in assuring customers that the **HiVisTex™** retro reflective tape used is of the highest quality and fully compliant to ANSI/ISEA 107 standard. HiVisTex gives superior performance in all weather conditions. Every roll of reflective tape is tested separately to ensure that it meets the ANSI/ISEA 107 standard



RETROREFLECTOMETER

This is for checking the performance of retroreflective tape.



HIVISTEX REFLECTIVE TAPE

This has thousands of glass beads per centimeter squared - working as thousands of tiny mirrors, reflecting light back towards its source as a brilliant white glow.

HIGH VISIBILITY WARNING CLOTHING

Our High Visibility range is fully certified and tested to the ANSI/ISEA 107 standard, ideal for those who will not compromise on style, comfort, protection and performance. These garments are designed to keep you warm, dry and visible in all conditions.

ANSI/ISEA 107 HIGH VISIBILITY - 2015

ANSI/ISEA 107-2015 is the American National Standard for High Visibility Safety Apparel and Headwear. The industry standard developed by the American National Standards Institute provides a uniform, authoritative guide for the design, performance specifications, and use of High Visibility and reflective apparel including vests, jackets, bib/jumpsuit coveralls, pants 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 retro-reflective materials.



ANSI/ISEA 107 Performance parameter:

X indicates the garment Type (3 Types)
Y indicates the Performance Class (4 Classes)
Z indicates flame resistance statement represented as either 'FR' or 'NOT FR'.

High Visibility Garment Types are designated by the work environment in which the wearer is performing a task. There are 3 types as shown on the table below – **Type O, Type R and Type P**.

Performance Classes provide a range of design options corresponding with the needs of the user in the expected risk environment.

Class 1 (Type O) is worn in non-complex work areas in which vehicles will not be moving at roadway speeds.

Class 2 (Type R or P) uses more high visibility material than Class 1 which allows the HVSA to define the human more effectively.

Class 3 (Type R or P) can offer greater visibility to the wearer in both complex backgrounds and through a full range of body movements by mandatory placement of background material and reflective tape on sleeves, legs etc.

Class E Supplemental Items such as pants, overalls, shorts and gaiters shall not be worn alone to meet HVSA PPE requirements. When a Class E item is worn with Performance Class 2 or Class 3, the overall classification shall be Performance Class 3.

Examples:



TYPE R CLASS 3
Must incorporate a minimum of 1240 in² of background material and 310 in² of retroreflective materials.



TYPE R CLASS 2
Must incorporate a minimum of 775 in² of background material and 201 in² of retroreflective materials.



TYPE O CLASS 1
Must incorporate a minimum of 217 in² of background material and 155 in² of retroreflective materials.



CLASS E SUPPLEMENTAL
Must incorporate a minimum of 465 in² of background material and 109 in² of retroreflective materials.

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	0.14m ² (217in ²)	0.10m ² (155in ²)	25mm (1in.)
Type R Roadway and Temporary Traffic Control Zones	Class 2*	0.50m ² (775in ²)	0.13m ² (201in ²)	25mm (1in.) 35mm (1.38in.)
	Class 3**	0.80m ² (1240in ²)	0.20m ² (310in ²)	25mm (1in.) 50mm (2in.)
Type P Emergency and Incident Responders and Law Enforcement Personnel	Class 2	0.29m ² (450in ²)	0.13m ² (201in ²)	25mm (1in.) 50mm (2in.)
	Class 3	0.50m ² (775in ²)	0.20m ² (310in ²)	25mm (1in.) 50mm (2in.)
Supplemental Items	Class E	0.30m ² (465in ²)	0.07m ² (109in ²)	25mm (1in.) 50mm (2in.)

*For the smallest size in Type R, Class 2, a minimum of 0.35 m² (540 in²) of background material may be used to accommodate small-sized workers. All subsequent larger sizes must use 0.50 m² (775 in²).

**For the smallest size in Type R, Class 3, a minimum of 0.65 m² (1000 in²) of background material may be used to accommodate small-sized workers. All subsequent larger sizes must use 0.80 m² (1240 in²).

High Visibility accessories are not intended to be used alone as personal protective equipment against struck-by hazards and these items do not contribute to the minimum areas of visible materials of the HVSA.

Table 2. Minimum area of visible materials of optional high visibility accessories

Accessory	Background Material	Retroreflective or Combined-Performance Materials	Minimum Width Reflective Material
Gloves	0.0065m ² (10in ²)	0.0065m ² (10in ²)	25mm (1in.)
Arm or leg bands	0.015m ² (24in ²)	0.015m ² (24in ²)	25mm (1in.)
Headwear, hoods (attached or detachable)	0.05m ² (78in ²)	0.0065m ² (10in ²)	25mm (1in.)

