

REFLECTIVE GARMENTS

Summary of relevant information contained in the new ANSI/ISEA 107-2004 standard.

Key Definitions:

Background material: Colored fluorescent material intended to be highly conspicuous, but not intended to comply with the requirements of this standard for retroreflective material.

Fluorescent material: Material that emits optical radiation at wavelengths longer than absorbed. These materials enhance daytime visibility, especially during dawn and dusk.

Retroreflective material: Material which is a retroreflector and is either 1) not intended to comply with the requirements of this standard for background material, or 2) is a combined-performance retroreflective material.

Specific Requirements: Whenever multiple bands are placed on the garment, then bands shall be spaced in a manner which provides a minimum distance between bands of retroreflective material at least equal to the width of the band.

If upper bands are utilized, they shall encircle the upper part of the sleeves between the elbow and the shoulder. When lower placement is utilized, the bottom edge of the material shall not be less than 2 inches from the bottom of the sleeve.

Gaps in retroreflective and background materials to enable fastening shall not be more than 2 inches horizontally.

Class 1, 2, or 3 garments such as vests, waistcoats, jackets, ponchos, coveralls and bib overalls shall meet the requirements for the respective Class of high visibility safety clothing, and shall have contiguous areas of retroreflective material encircling the torso, placed in such a manner to provide 360 ° visibility of the wearer. In addition, coveralls and bib overalls shall have continuous areas of retroreflective materials encircling each leg in such a manner to provide 360 ° visibility of the wearer.

Overalls or Waistband trouser may be classified as Class E garments if they have a minimum of .07 m² retroreflective material.

When such Class E garments are worn with a Class 2 vest, waistcoat, jacket, or poncho, the overall classification for the ensemble shall be classified as a Class 3 ensemble.

All reflective tape must be placed a minimum of 2 inches above the bottom edge of the garment and the sleeve.

Please note there is no specific required layout of reflective material, only specific layout requirements that must be met.

Other Notes:

Specific Marking: Number of this specific ANSI standard (ANSI/ISEA 107-2004)

Pictogram showing the garment Class and level of performance of the retroreflective material.

Footage of Reflective Tape:

Class 1 Garments require 6.46 feet of Reflective Tape.

Class 2 Garments require 12.2 feet of Reflective Tape.

Class 3 Garments require 12.92 feet of Reflective Tape.

Background Colors: (Colors must be certified as one of the following before and after aging)

Fluorescent yellow-green (Fluorescent lime-yellow)

Fluorescent orange-red

Fluorescent red

Breathable:

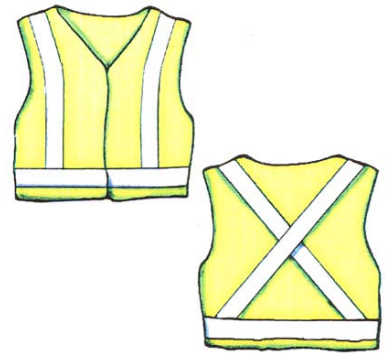
Background material which is marketed as providing protection during rainfall, and classified as breathable shall be tested in accordance with ASTM-E96-00, Procedure B (upright) with a minimum requirement not lower than 600g/m²/24 hours; and Procedure BW (inverted) with a minimum requirement not lower than 3, 600g/m²/24 hours.

Our thanks to Bob Neideigh from Tingley for his work in putting this information together and for his willingness to allow us to use it.



Conspicuity Class 1

- For workers in occupations that permit full and undivided attention to approaching traffic.
- Work backgrounds are not complex.
- Pedestrian workers are separated from traffic.



High-Visibility Safety Apparel for:

- Parking lot attendants
- Shopping cart retrievers
- Warehouse workers
- Roadside or sidewalk maintenance workers
- Delivery vehicle drivers



Class 1 vests have 6.46 linear feet of 50 mm (2") trim or 9.39 linear feet of 35 mm (1-3/8") trim.

CLASS 1

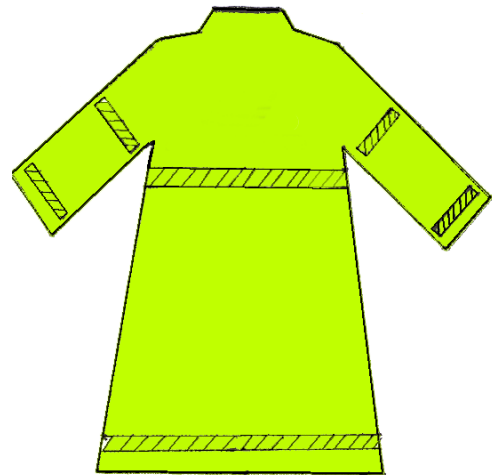
Conspicuity Class 2

- Workers require greater visibility under inclement weather conditions.
- Work backgrounds are complex.
- Tasks divert attention from approaching Vehicle traffic.



High-Visibility Safety Apparel for:

- Roadway construction workers
- Utility workers
- Survey crews
- Railway workers
- School crossing guards
- High-volume parking or toll-gate personnel
- Airport baggage handlers/ground crew
- Emergency response personnel
- Law enforcement personnel
- Accident site investigators



Class 2 garments are trimmed with 8.375 linear feet of 50 mm (2") trim or 12.2 linear feet of 35 mm (1-3/8") trim.

CLASS 2

Conspicuity Class 3

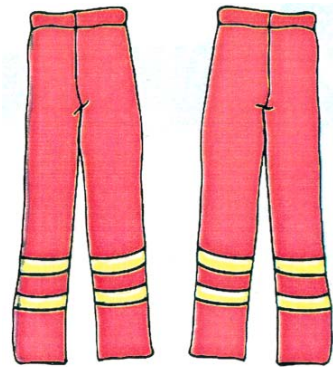
- For pedestrian workers and vehicle operators whose high task loads place them in danger.
- Wearer must be conspicuous through the full range of body motions at a minimum of 390 m (1,280 feet).
- Wearer must be identifiable as a person.



*** Drawings are for information purposes only and do not represent a specific required layout ***

High-Visibility Safety Apparel for:

- Roadway construction workers
- Utility workers
- Survey crews
- Emergency response personnel



Class 3 garments are trimmed with 12.92 linear feet of 50 mm (2") trim.

CLASS 3