

UNDERSTANDING THE NEW ANSI/ISEA 107-2020 STANDARD FOR HIGH VISIBILITY APPAREL

5 REVISIONS YOU NEED TO KNOW ABOUT NOW

Level of protection will not be affected and your current inventory will not be compromised. Please be assured your ANSI/ISEA 107-2015 garments will still provide protection and visibility at least equal to those certified to ANSI/ISEA 107-2020. Changes in the revised standard primarily affect categorization and labeling, NOT protection.

PURPOSE & SCOPE

The ANSI/ISEA 107-2020 Standard provides criteria for materials, test procedures, design, labeling, and care instructions used in the construction and manufacturing of high visibility apparel. Radians is a member of the High Visibility Products Group of the International Safety Equipment Association (ISEA) and has been actively involved with the ANSI/ISEA 107-2020 revision. This explanation is intended to help users of ANSI/ISEA 107 rated HVSA understand revisions to the 2020 update.

INTRODUCTION

How has the ANSI Standard Evolved?

The original published version of ANSI/ISEA 107-1999 established three classes of High Visibility Safety Apparel (HVSA):

- **Class 1 = Low level protection**
- **Class 2 = Intermediate protection**
- **Class 3 = Highest level of conspicuity**

When originally published, there were no regulations or guidelines about the design, material specification, or performance criteria for HVSA in the United States. The original version was developed largely based on existing European HVSA standards and was limited to three classes defined by potential exposure to traffic speed.

Since 1999, the ANSI/ISEA 107 voluntary industry consensus standard has been recognized by federal, state, and local authorities as well as private industry. The current US Department of Transportation’s Federal Highway Administration (FHWA) regulations have required workers on or near Federal-aid highways to wear Class 2 or Class 3 garments. Additionally, the 2009 revision to the Manual on Uniform Traffic Control Devices (MUTCD) extends this provision to workers on all roads “open to public travel,” i.e., any road where you can drive a car without passing through a traffic control gate, including private property.

ANSI/ISEA 107.v1 1999	Origin of ANSI/ISEA 107 Standard for designation of HVSA (High Visibility Safety Apparel)
ANSI/ISEA 107.v2 2004-2010	Requirement for all Class 3 Garments to Have Sleeves
ANSI/ISEA 207.v1 2006	Creation of the Public Safety Standard, ANSI/ISEA 207
ANSI/ISEA 107.v3 2010	Clarification of FR Requirements. Requirement for Reflectivity in the Shoulder Area.
ANSI/ISEA 107-2015.v4	ANSI 107-2015 standard provided criteria for materials, test procedures, design, labeling and care instructions.
ANSI/ISEA 107-2020.v5	2020 is the latest revision to the standard

Garment Type	Intended Use	Work Activity Examples	Performance Classes
Type O Class 1	Off-Road	Warehouse Workers Mining PetroChem	Class 1 Performance Class 1 provides the minimum amount of high-visibility materials required to differentiate the wearer visually from non-complex work environments where struck-by hazards will not be approaching at roadway speeds.
Type O provides daytime and nighttime visual conspicuity enhancement for workers in occupational environments which pose struck-by hazards from moving vehicles, equipment and machinery, but which will not include exposure to traffic on public access highway right-of-ways or roadway temporary traffic control (TTC) zones.			
Type R Class 2	Roadway & Temporary Traffic Control	Roadway Construction Worker Municipalities Airline Ramp Personnel	Class 2 Performance Class 2 provides for the use of additional amounts of high-visibility materials, which may allow design opportunities to define the human form more effectively.
Type R Class 3	Roadway & Temporary Traffic Control	Flaggers Dept of Transportation Nighttime Work Municipalities State of VA	Class 3 Performance Class 3 can offer greater visibility to the wearer in both complex backgrounds and through a full range of body movements by mandatory placement of background, retroreflective and combined-performance materials on sleeves and pant legs (if present). Regardless of the area of materials used, a sleeveless garment or vest alone shall not be considered Performance Class 3.
Type R provides daytime and nighttime visual conspicuity enhancement for workers in occupational environments which include exposure to traffic from public access highway right-of-ways, or roadway temporary traffic control (TTC) zones, or from work vehicles and construction equipment within a roadway temporary traffic control (TTC) zone.			
Type P Class 2	Public Safety	Police, Fire, EMS, Sheriff, etc.	Class 2 Performance Class 2 provides for the use of additional amounts of high-visibility materials, which may allow design opportunities to define the human form more effectively.
Type P Class 3	Public Safety	Police, Fire, EMS, Sheriff, etc.	Class 3 Performance Class 3 can offer greater visibility to the wearer in both complex backgrounds and through a full range of body movements by mandatory placement of background, retroreflective and combined-performance materials on sleeves and pant legs (if present). Regardless of the area of materials used, a sleeveless garment or vest alone shall not be considered Performance Class 3.
Type P provides daytime and nighttime visual conspicuity enhancement for emergency and incident responders and law enforcement personnel in occupational environments which include exposure to traffic (vehicles using the highway for purposes of travel) from public access highway right-of-ways, or roadway temporary traffic control (TTC) zones, or from work vehicles and construction equipment within a roadway temporary traffic control (TTC) zone or from equipment and vehicles within the activity area. Type P HVSA provides additional options for emergency responders, incident responders and law enforcement who have competing hazards or require access to special equipment.			
Supplementary Class E Pants, bib overalls, shorts, and gaiters shall be designated Class E. Class E items shall not be worn alone for the purposes of meeting 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.			

NEW ANSI 107-2020 STANDARDS UPDATES YOU'LL WANT TO KNOW ABOUT

Levels of protection have generally not been affected. Rest assured your inventory and garments marked as ANSI/ISEA 107-2015 will still provide appropriate, accepted protection. Garments will be marked to the new standard when all raw material testing is updated.

1

**ACCESSORIES (HATS, GLOVES, ARMBANDS ETC.)
HAVE BEEN REMOVED FROM THE STANDARD.**

2

**CRITERIA FOR HIGH-VISIBILITY SINGLE USE DISPOSABLE COVERALL
GARMENTS HAVE BEEN ADDED.**

3

**CRITERIA REGARDING THE NECESSITY FOR CONTIGUOUS HORIZONTAL BAND OF
BACKGROUND MATERIAL HAS BEEN MORE CLEARLY DEFINED.**

4

**CRITERIA FOR TESTING TEAR RESISTANCE AND BURST STRENGTH HAS BEEN
ADJUSTED TO MATCH OTHER NATIONAL STANDARDS. AN OPTIONAL NIGHTTIME
LUMINESCENCE TEST HAS BEEN ADDED.**

5

**THE NUMBER OF CLEANING PROCESSES A GARMENT CAN WITHSTAND IS ONLY
REQUIRED TO BE STATED IN THE INSTRUCTIONS FOR USE, NOT ON THE CARE LABEL.
ALL RADIANS GARMENTS WILL CONTINUE TO EXCEED MINIMUM REQUIREMENTS.**

Our products, technologies, training materials, videos and services can be viewed on our website at www.radians.com. For additional information about ANSI 107-2020, specifically a Radians White Paper, PowerPoint Training presentation, and Radians Fast Facts, contact your Radians Sales Rep toll free at 1-877-723-4267 or email sales@radians.com.

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