

Personal Protective Equipment

Module 2, Unit B

Objective

Describe personal protective equipment (PPE) including:

- hard hats
- eye protection
- gloves
- fall protection
- safety vests
- respirators
- hearing protection

Hard Hats

Hard hats are worn to protect against:

- Impact or penetration from falling objects
- Electric shock or electric arcs

Types:

- I: Protection from above
- II: Protection from above and sides

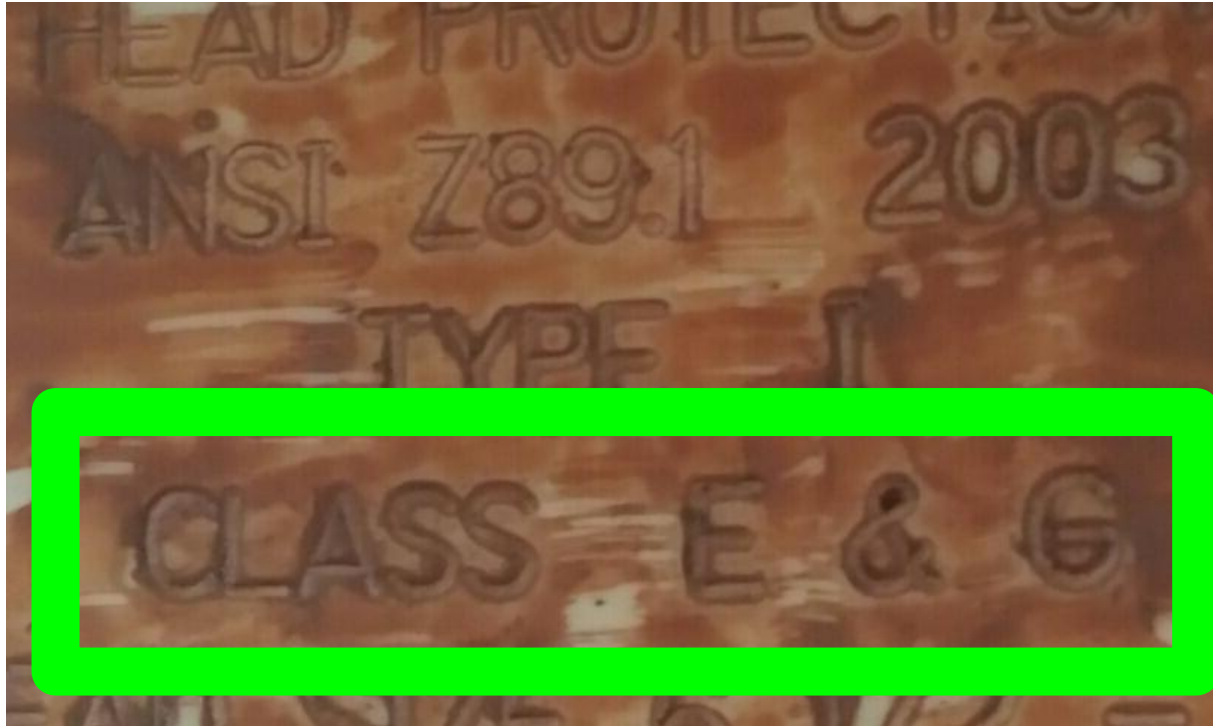
Classes

- E: Electrical- withstands 20,000V (20kV)
- G: General- withstands 2,200V (2.2kV)
- C: Conductive- provides no electrical protection





Type I (protection only from above) vs. Type II (protection from above and sides)



Hard hat classes (A, G, E) are not necessarily visually different. ANSI certification/ratings are often on the inside of the brim.

Eye Protection

Eye protection is worn to protect against:

- impact
- heat
- chemicals
- dust
- optical radiation

Types of eye protection include:

- safety glasses
- safety goggles
- face shields





Safety Glasses

vs.



Safety Goggles



Face shield for flying debris vs. face shield for welding/cutting torch

Gloves

Gloves are worn to protect against:

- abrasions and lacerations
- heat
- chemicals
- sparks and arcs

Types of gloves include:

- leather
- canvas
- metal mesh
- chemical and liquid protection
- electrical protection





Leather vs Canvas vs Metal mesh



Chemical resistant and liquid protection gloves



Electrical protection gloves and sleeves

Fall Protection

Fall protection categories

- fall arrest
- work positioning
- travel restricting

Components:

- harness
- anchorage
- lanyard





Fall arrest, work positioning, and travel restricting



Components: harness, anchorage point, lanyard

Safety Vests

Safety vests are worn to increase visibility of workers.

ANSI classes:

- I: vehicle traffic <25mph
- II: vehicle traffic >25mph
- III: vehicle traffic >50mph



**High
visibility
vests must
be worn**



Classes I, II, and III: one of the most notable differences between the classes is the amount of reflective material on the vest

Respirators

Respirators are worn to protect against hazardous levels of airborne contaminants.

Types:

- air-purifying
 - particulates
 - gas and vapor
 - combination
- atmosphere-supplying
 - air supplied
 - combination
 - self-contained breathing apparatus





Air purifying respirators (with and without eye protection)



Air supplied respirator



Self-contained breathing apparatus

Hearing Protection

Hearing protection is worn to protect against hazardous levels of noise.

Types:

- single-use earplugs
- preformed earplugs
- ear muffs



Single-use vs. preformed earplugs



Various types of ear muffs

Reveiw

Describe personal protective equipment (PPE) including:

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- safety vests
- respirators
- hearing protection