

TECH Bulletin: **Personal Protective Equipment**



PPE FOR THE CONSTRUCTION INDUSTRY

The use of PPE (Personal Protective Equipment) specifically required by OSHA 29 CFR 1926 can be found in Subpart E, Personal Protection and Lifesaving Equipment. The general requirements for PPE can be found in this Subpart; other PPE standards can be found in Part 1926 for woodworking tools, asbestos, excavation and more.

GENERAL REQUIRMENTS (1926.95)

Protective equipment must be provided, used and maintained in a sanitary and reliable condition. PPE refers to many different protective devices, but this standard specifically talks about eye, face, head and extremity protection.

Even though it is not required by this standard, a hazard assessment should be conducted of all work areas so that proper protective equipment can be selected. When choosing PPE, you should consider such hazards as heat, impact, chemicals, compression, electrical, light/radiation, punctures, and dust.

FOOT PROTECTION (1926.96)

Footwear must comply with the ANSI (American National Standards Institute) Z41-1991 standard. You can usually find the "ANSI Z41-1991" imprint inside the shoe. This standard specifies impact and compression tests with which the footwear must comply. To meet ANSI standards, the protection must be an integral part of the shoe. Removing toe caps or covers is not allowed in areas where it has been determined that foot protection is required.

HEAD PROTECTION (1926.100)

Head protection must be provided whenever there is a possible danger of head injury due to falling or flying objects, impact, electrical shock or burns. This headgear must comply with ANSI Z89-2.1986, which stipulates testing of type A, B, and C helmets. Choose the right type of helmet based on whether you need just impact protection (class C), or both impact and electrical protection (classes A and B).

HEARING PROTECTION (1926.101)

In determining noise exposure you must first refer to Table D-2, "Permissible Noise Exposure", in 1926.52. If you are exceeding the noise exposures indicated in this section, hearing protection is required.

When an employee is exposed to a 90 dB 8-hour Time-Weighted Average (TWA) and engineering out noise levels is not feasible, hearing protection must be provided. Plain cotton ear plugs are not allowed, and any ear protective device inserted in the ear must be fitted by a competent person.

Hearing protection can be in the form of ear plugs or earmuffs. When selecting the proper type, look at the Noise Reduction Rating (NRR) assigned to the protective device and observe the actual noise level at the job site. This will help you determine which hearing protection device is best for your application. For example, if your employees have an eight-hour time-weighted exposure of 100 dB, they need a hearing protector with an NRR of at least 11 dB. This will get them below the 90 dB rating found in Table D-2. It is suggested you go for a factor of 2, thus use hearing protection devices that have a NRR of 22.

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EYE AND FACE PROTECTION (1926.102)

Eye and face protection is evaluated based on several types of exposure. Consideration must be given to impact, chemical splash, glare, heat ultraviolet or laser rays, etc. Protective eyewear must also be reasonably comfortable, fit snugly, be easy to clean and disinfect, and comply with ANSI Z87.1-1986 impact standard.

When selecting eyewear for radiant energy and laser safety, refer to “Lens Shade Numbers,” and “Laser Safety Glass” contained within the standard.

RESPIRATORY PROTECTION (1926.103)

This standard follows the same format as the General Industry Standards found in 1910.134.

SAFETY BELTS, LIFELINES AND LANYARDS (1926.104)

Most details of fall protection can be found under Subpart M 1926.500 – “Floor and Wall Openings”. 1926.104 covers the specifics of anchorage, test requirements, required materials for manufacturing of belts, lifelines and lanyards, and load testing.

When looking for equipment that meets or exceeds requirements in the section, look for ANSI-rated equipment. The ANSI ratings you will find are: (1) ANSIA 10.14, Fall Protection Devices and (2) ANSIA 14.3, Ladder Safety Systems. You will also find reference to ANSI Z359.1, Harness and Lanyards, which is more strict than the A10.14. However, the A10.14 is the general guideline used for fall protection devices.

One main point of this standard states that if any of this fall protective equipment is subjected to a fall, it must be immediately removed from service and not used again. It also states that fall arrest systems should allow for a fall no greater than 6 feet.

SAFETY NETS (1926.105)

When working more than 25 feet above the ground or water surface, and using a ladder safety line or scaffold platform is impractical, use of safety nets is allowed. These nets must extend 8 feet beyond the edge of the work surface and be installed as close under the work surface as practical, but can not exceed 25 feet. The nets must meet or exceed ANSA A10.11-1989, Person and Debris nets. This guideline stipulates mesh size, impact resistance and breaking strength.

WORKING OVER OR NEAR WATER (1926.106)

In instances where drowning may occur, employees must be provided with U.S. Coast Guard-approved life jackets or work vests. These jackets and vests must be inspected for defects after each use. Along with vests, a lifesaving skiff has to be available plus ring buoys with 90 feet of line. The ring buoys must be placed no more than 200 feet apart.