

SECTION 22.0 | PERSONAL PROTECTIVE EQUIPMENT (PPE)

Protective equipment, including personal protective equipment (for head, eyes, face, and extremities), respiratory devices, protective clothing, and protective shields and barriers should be used. This protective equipment must be used wherever injury or impairment of function of any body part (through absorption, inhalation, or physical contact) is likely because of process or environmental hazards, radiological hazards, chemical hazards, or mechanical irritants. All PPE shall be used and maintained in a sanitary and reliable condition. Defective or damaged equipment shall not be used and must be tagged or destroyed and replaced. All issued personal protective equipment will be cost-free to the employee.

All employees must understand and follow the procedures identified in this program.

22.1 | Eye Protection

When exposed to facial or eye hazards from flying fragments, chemicals, acids, or caustic liquids, melted metal, or chemical gasses or vapors, employees must use the required eye or face protection. PPE used to protect the eyes and face must follow ANSI Standard Z87.1-2003 (Z87+), Occupational and Educational Personal Eye and Face Protective Devices.

Safety Glasses

While on company property, employees, subcontractors, and visitors must always wear safety glasses with side shields that meet ANSI Z-87.1-2003 standards with “high Impact lenses”. Requirements as described below:

1. In shops and warehouses, and at field locations, except in striped safety zones that have been designated and approved.
2. In all yard work zones. Everyone in the vicinity of loading or unloading equipment. All employees who perform mechanic or maintenance work, operate equipment (e.g., forklift and welding), test stand operations, or do any work that may potentially cause an eye injury.
3. In a restroom, office, or any other building when performing work that may potentially cause an eye injury.
4. Provide with visitor glasses. If approved prescription safety glasses are not available for an individual, they must wear “Over the glass” type safety goggles or glasses over their regular prescription glasses until they obtain approved prescription safety glasses.
5. When assisting welders, employees must wear absorbent safety glasses to protect the assistant from ultra-violet (UV) and/or infrared rays (IR).
6. No employee is allowed to wear dark shaded lens (sunglasses) darker than # 1 shade unless welding or assisting a welder.
7. The requirement to wear safety eyewear will be exempt only based on a written “exceptions for medical reasons” from a doctor.
8. Employees are not required to wear safety glasses:
9. Inside an office.
10. In parking lots when traveling to and from vehicles, or office buildings using main doors that do not enter shops.

Goggles

1. When handling or mixing liquid chemicals, solvents, paints, etc., employees must wear chemical splash proof goggles as recommended on the Safety Data Sheet for the material being handled.
2. When blowing equipment down with air the employee must wear dust proof goggles. They must also be worn when the employee is performing a job task where safety glasses do not do an adequate job of preventing airborne particles from entering the openings around the lenses and side shields.

Face Shields

When operating a handheld or immobile grinder with a wire or abrasive wheel the employee must wear a full-face shield over safety glasses. The full-face shield must also be used when chipping paint or concrete. Also, when performing job tasks where flying objects may potentially strike the face, if safety glasses or goggles do not provide adequate protection, the employee must wear a full-face shield over safety glasses.

22.2 | Head Protection

When working in areas where a head injury is possible due to employee-initiated impact, or impact from falling or other moving objects, employees must wear protective helmets. Helmets must follow ANSI Standard Z89.1-1997 Class E, American National Standard for Industrial Head Protection for Type II head protection or must be equally effective.

1. Hardhats must be worn when working in areas where head injury is possible from falling objects.
2. Hardhats must be worn at all warehouses, field, and shop locations, or any location where it is determined to be necessary as per the location's PPE Hazard Assessment.
3. Never alter hardhats in any way.
4. Never paint or apply unauthorized stickers, name plates, etc. on hardhats.
5. Never drill, cut, bend, or apply heat to a hardhat.
6. Never alter the suspension system of a hardhat.
7. Employees must inspect hardhat regularly for chips, scratches, cracks, signs of heat exposure (sun cracks), etc.
8. Immediately replace any defective hardhats.
9. Never place a hardhat in the rear window of a vehicle (they will be exposed to the sun or may become a projectile in a vehicle accident).
10. Hardhats must be made available to visitors.
11. Train employees in the use, care, and maintenance of head protection equipment.

22.3 | Hearing Protection

1. While in posted "High Noise" areas, all employees, subcontractors, and visitors must wear hearing protection.
2. All areas that are known, or suspected to have, noise levels more than 85 dBA (constantly or intermittently) must have warning signs posted.
3. When noise caused by machinery, tools, etc., prevents normal conversations from being clearly heard, employees shall wear hearing protection even if warning signs are not posted.
4. General rule of thumb: If you must yell to be heard, you require hearing protection.

Types

- Preformed Inserts (ear plugs)
- Canal Caps (headband type)
- Muff, either headband or hard hat mounted
- Earmuffs and earplugs supplied to employees should be in sizes and configurations that are comfortable for the employee.

Care and Maintenance

1. Employees must inspect hearing protection before each use.
2. Keep hearing protection clean to prevent ear infections.
3. Discard disposable ear plugs when they become dirty, greasy, or cracked.
4. Replace any earmuffs that have cracked seals, deteriorated foam inserts, or are defective.

Fit

1. Because everyone is different, hearing protection must be selected for the individual. The employee must try a variety of styles to find one that is comfortable and provides adequate protection.
2. Instruct employees in how to obtain the proper fit.

22.4 | Hand Protection

When performing work tasks that may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals, employees must wear gloves.

1. **Welding:** When performing arc welding or oxy/gas cutting, employees must wear welding gloves made of leather or other heat resistant materials.
2. **Chemical:** When handling chemicals that specify gloves as PPE, the employee must have impervious (chemical resistant) gloves.
 - a. To select the correct glove type, refer to the specific chemical's Safety Data Sheet.
 - b. Employees who work with chemicals, i.e., solvent vats, will be issued their own gloves for hygienic purposes.
3. **Leather:** When working with sharp materials, or when handling rigging equipment, employees must wear leather gloves.
4. **Cloth:** When handling objects or materials that could cause blisters, splinters, cuts, etc., the employee must wear cloth gloves.
5. **Heat Resistant:** When handling hot bearings, races, or other materials or objects (heated beyond room temperature), employees must wear heat resistant gloves.
6. **Insulated:** To prevent frostbite in extreme cold climates, employees must wear insulated gloves.

Exception: While working with rotating machinery, machinists are exempt from wearing gloves.

Glove Inspections

1. Prior to each use, inspect gloves for holes, tears, and worn areas.
2. Periodically air test chemical gloves for pinholes by tightly twisting the cuff, expand the glove by applying low air pressure, and submerging the glove in water to check for bubbles.
3. Immediately discard any defective gloves.

22.5 | Foot Protection

1. All employees with regular duties at field locations, in shops and warehouses must wear safety footwear.
2. Visitors and office workers entering these areas infrequently are not required to wear foot protection if they stay away from the work being performed.
3. If visitors or office workers must be near the work, the work must be stopped while in the area or safety footwear must be worn.
4. When in shops, warehouses, field locations and parts departments, employees must wear leather or equivalent boots (lace up or pull up).
5. Boots must provide ankle protection and must have soles that are designed to protect the feet from punctures and must have defined heels for climbing ladders.
6. When job tasks there is a risk of equipment or material crushing the foot, toe guards must be worn.
7. Safety footwear must comply with ANSI Z41-1999 standards.
8. Some client locations may require everyone to wear safety footwear. Before visiting field locations, check with the local supervisor for client requirements.