

PERSONAL PROTECTIVE EQUIPMENT

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Personal Protective Equipment (PPE) Overview

MIOSHA Parts 33 and 433:

- Perform a job/task hazard assessment (JHA)
- Selection and use of PPE
- Train Employees
- Clean and sanitize multi-user PPE



Employer Responsibilities

- Shall provide PPE at no cost to employees
- Shall not permit defective or damaged personal protective equipment to be used
- Shall verify that the required workplace hazard assessment has been performed through a written certification
- Selection and use based on assessment

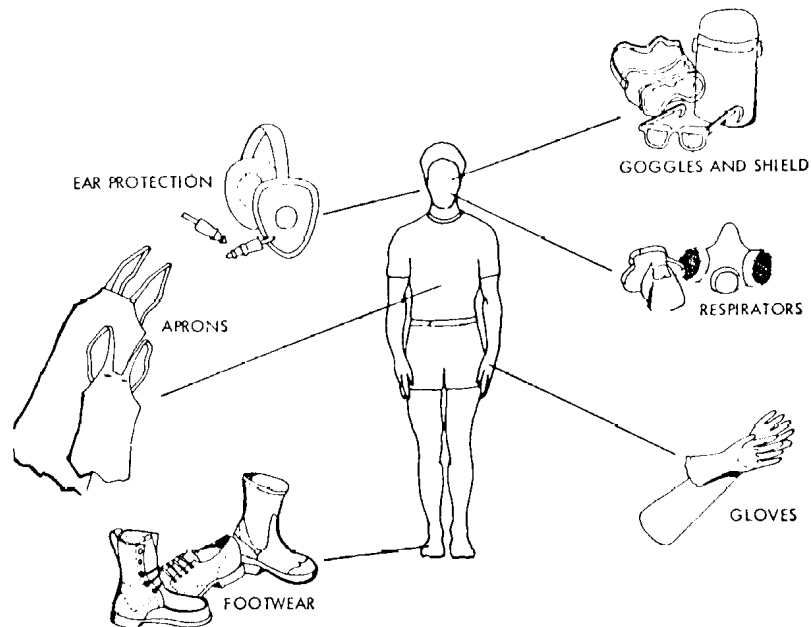


Hazard Assessment

A certification which identifies all of the following:

- a) The workplace evaluated
- b) The person certifying that the evaluation has been performed
- c) The date **or dates** of the personal protective hazard assessment
- d) ***The document is a certification of hazard assessment**

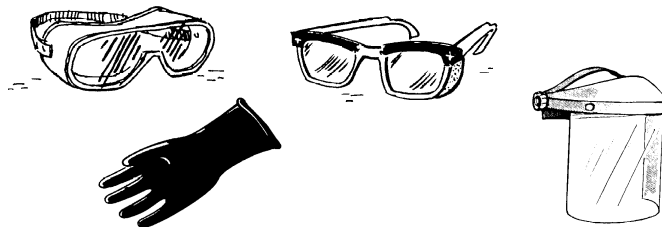
*New statement as of February 6, 2014. Separate certification sheet no longer required. The written assessment **IS** the certification.



Selection of PPE

Based on the hazard assessment:

- Select type of PPE that will protect the employee
- Communicate selection decision
- Ensure proper fit
- ***Designed and constructed to be safe for the work to be performed**

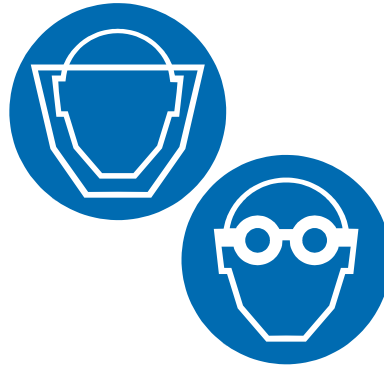


*New statement as of February 6, 2014.

Eye and Face Protection

Hazards:

- Flying Particles
- Molten Metals
- Electric Arc
- Injurious Radiation
- Extreme Hot / Cold Splash
- Chemical Gases / Vapors



Eye Protection (continued)

- Spectacles
 - Permanently attached side shields
 - Detachable side shields
- Face shield
- Goggles
- All eye protection devices shall be in compliance with the American National Standards Institute (ANSI) – Z87.1 standard
- ***Protective eye and face protection devices that the employer demonstrates are at least as effective as... [ANSI – Z87.1]...shall be considered to be in compliance with this rule.**



*New statement added to standard as of February 6, 2014:


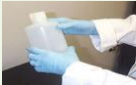

Arm and Hand Protection

Hazards:

- Skin Absorption
- Severe Abrasions
- Chemical Burns
- Thermal Burns
- Punctures
- Severe Lacerations
- Extreme Cold






Gloves Types and Application

Glove Material	Intended Use	Advantages and disadvantages
Latex (natural rubber) 	Incidental contact	<ul style="list-style-type: none"> • Good for biological and water-based materials • Poor for organic solvents • Little chemical protection • Hard to detect puncture holes • Can cause or trigger latex allergies
Nitrile 	Incidental contact (disposable exam glove) Extended contact (thicker reusable glove)	<ul style="list-style-type: none"> • Excellent general use glove. Good for solvents, oils, greases, and some acids and bases • Clear indication of tears and breaks • Good alternative for those with latex allergies
Vinyl 	Incidental contact	<ul style="list-style-type: none"> • Clear indication of tears and breaks • Good alternative for those with latex allergies • Looser fit may interfere with some procedures.



Source: UC Berkley, Environmental Safety and Health, Glove Selection Chart

Gloves Types and Application

Glove Material	Intended Use	Advantages and disadvantages
Butyl rubber 	Extended contact	<ul style="list-style-type: none"> • Good for ketones and esters • Poor for gasoline and aliphatic, aromatic, and halogenated hydrocarbons
Neoprene 	Extended contact	<ul style="list-style-type: none"> • Good for acids, bases, alcohols, fuels, peroxides, hydrocarbons, and phenols • Good for most hazardous chemicals • Poor for halogenated and aromatic hydrocarbons
Norfoil or Silver Shield 	Extended contact	<ul style="list-style-type: none"> • Good for most hazardous chemicals. • Poor fit <p>(Note: Dexterity can be partially regained by using a heavier weight Nitrile glove over the Norfoil/Silver Shield glove.)</p>

Source: UC Berkley, Environmental Safety and Health, Glove Selection Chart

Gloves Types and Application

Glove Material	Intended Use	Advantages and disadvantages
Polyvinyl chloride (PVC) 	Specific use	<ul style="list-style-type: none"> • Good for acids, bases, oils, fats, peroxides, and amines • Good resistance to abrasions • Poor for most organic solvents
Polyvinyl alcohol (PVA) 	Specific use	<ul style="list-style-type: none"> • Good for aromatic and chlorinated solvents • Poor for water-based solutions

Source: UC Berkley, Environmental Safety and Health, Glove Selection Chart

Gloves Types and Application

Glove Material	Intended Use	Advantages and disadvantages
Stainless 	Specific use	<ul style="list-style-type: none"> • Cut-resistant gloves • Sleeves are also available to provide protection to wrists and forearms <p>Note: If potential for biological or chemical contamination: wear appropriate disposable gloves on top of your cut-resistant gloves and discard after use</p>
Kevlar 		
Leather 		

Source: UC Berkley, Environmental Safety and Health, Glove Selection Chart

Body Protection

Hazards:

- Chemical Contact: Formaldehyde, glutaraldehyde, other disinfectants, lab chemicals and cleaners.
- Thermal Burns: Kitchen areas
- Extreme Cold: Kitchen freezers and Use of Cryogenic liquids (CO₂, nitrogen, Nitrous Oxide)
- Severe Lacerations: Kitchen, Receiving/Supply
(Note: scalpels are included in Bloodborne Standard)

Body Protection Types:

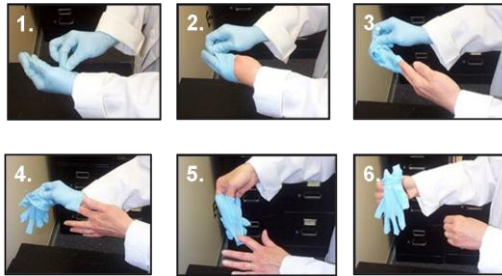
- Lab coat
- Aprons
- Full body suits



Training Requirements

Employee required to wear PPE shall be trained:

- When PPE is necessary
- What PPE is necessary
- How to:
 - Put it on (don)
 - Take it off (doff)
 - Adjust and wear



Source: Prolink, Bloodborne Pathogen Training Program

Training Requirements (continued)

- Limitations of Equipment
- Useful Life
 - Care (Clean/sanitize when applicable)
 - Maintenance
 - Disposal
- Employers Shall Retrain Employees When:
 - Changes in the workplace or operation
 - Changes in the types of PPE
 - Inadequate knowledge or use



Training requirements (rescinded)

~~(4) An employer shall verify that each affected employee has received and understood the required training through a written certification that contains all of the following information:~~

- ~~(a) The name of each employee trained.~~
- ~~(b) The date of training.~~
- ~~(c) The subject of the certification.~~

These requirements were rescinded February 6, 2014

Any Questions?

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