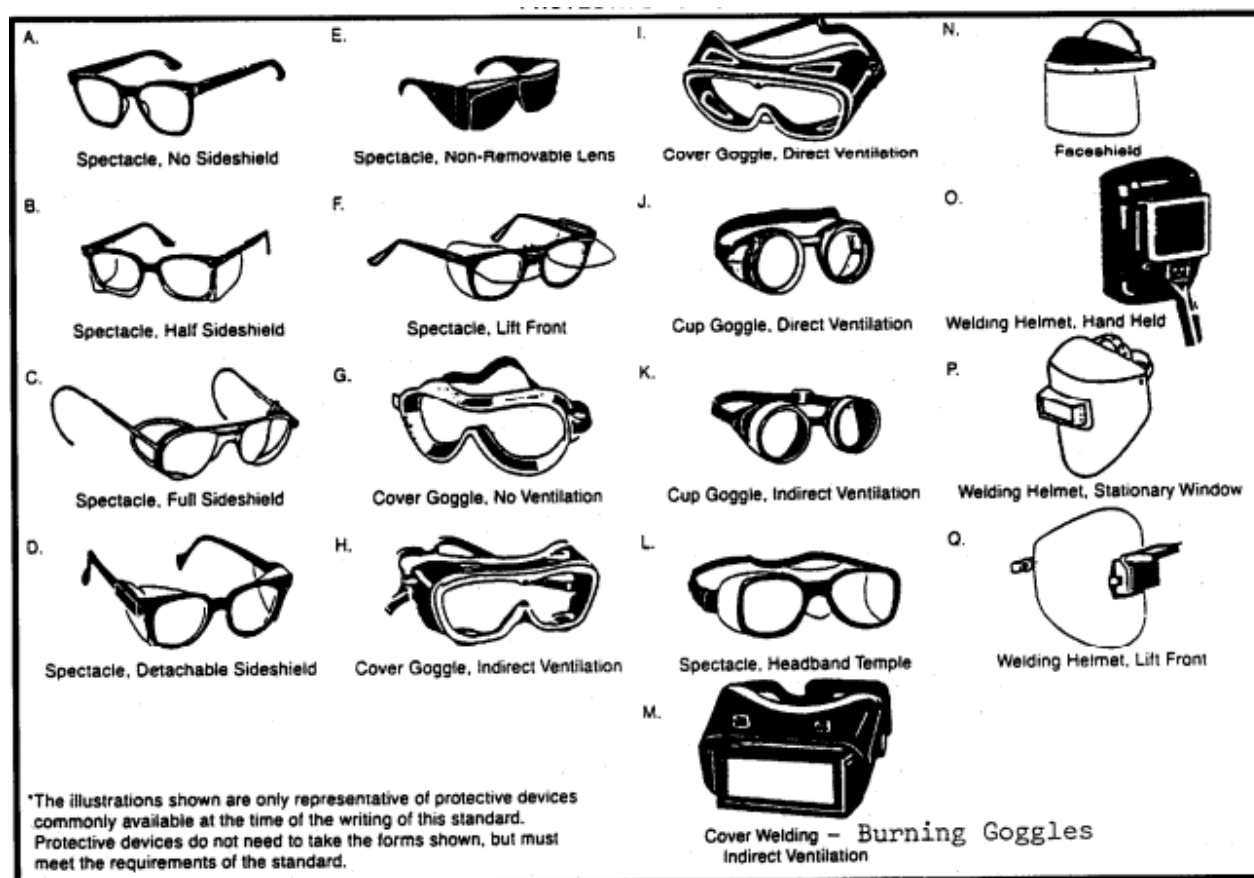


PPE Selection Information and Hazard Assessment

TABLE 1. EYE AND FACE PROTECTION SELECTION



SOURCE OF HAZARD	ASSESSMENT OF HAZARD	TYPE	PROTECTION (see notes on next page)
IMPACT – chipping, grinding, machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips, particles, sand, dirt, etc.	B, C, D, E, F, G, H, I, J, K, L, N	Spectacles with side protection, goggles, face shield. See note (1), (3), (5), (6), (10). For severe exposure, use face shield.
HEAT – furnace operations, pouring, casting, hot dripping, and welding	Hot sparks	B, C, D, E, F, G, H, I, J, K, L, N	Face shields, goggles, spectacles with side protection. For severe exposure, use face shield. See notes (1), (2), (3)
	Splash from molten metals	N	Face shields worn over goggles. See notes (1), (2), (3)
	High temperatures	N	Screen face shields, reflective face shield. See notes (1), (2), (3)

CHEMICALS – acid and chemical handling, use of cleaning products, paint use and clean-up products, pesticide and herbicide use	Splash	G, H, K	Goggles. For severe exposure, use face shield. See notes (3), (11)
	Irritating mists	G	Special-purpose goggles
DUST – woodworking, buffing, general dusty conditions.	Nuisance dust	G, H, K	Goggles, or spectacles with side protection. See note (8)
LIGHT and/or RADIATION – welding: electric arc.	Optical radiation	O, P, Q	Welding helmets or welding shields. Typical shades: 10-14. See notes (9) (12)
- welding: gas	Optical radiation	J, K, L, M, N, O, P, Q	Welding goggles or welding face shield. Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4. See note (9)
-cutting, torch brazing, torch soldering	Optical radiation	B, C, D, E, F, N	Spectacles or welding face shield. Typical shades: 1.5-3. See notes (3), (9)
-glare	Poor vision	A, B	Spectacles with shaded or special purpose lenses, as suitable. See notes (9), (10)

NOTES FOR TABLE 1. EYE AND FACE PROTECTIONS SELECTION

1. Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protection devices do not provide unlimited protection.
2. Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.
3. Face shields should only be worn over primary eye protection (spectacles or goggles).
4. As required by the standard, filter lenses must meet the requirements for shade designation in OSHA 1910.133(a)(5). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.
5. As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either protective devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.
6. Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.
7. Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.
8. Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.
9. Welding helmets or face shields should be used only over primary eye protection (spectacles or goggles).
10. Non-side shield spectacles are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for “impact.”
11. Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.

12. Protection from light radiation is directly related to filter lens density. See note (4). Select the darkest shade that allows task performance.

TABLE 2. FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY

Operations	Electric Size 1/32 in.	Arc Current (amps)	Minimum* Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11
Gas metal arc welding and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-550	10
Gas Tungsten arc welding		Less than 50	8
		50-150	8
		150-500	10
Air carbon	Light	Less than 500	10
Air cutting	Heavy	500-1000	11
Plasma arc welding		Less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	Light**	Less than 300	8
	Medium**	300-400	9
	Heavy**	400-800	10
Torch soldering			2
Torch brazing			3
Carbon arc welding			14

Operation	Plate thickness – inches	Thickness – mm	Minimum* Protective Shade
Gas welding: -Light -Medium -Heavy	Under 1/8	Under 3.2	4
	1/8 to 1/2	3.2 to 12.7	5
	Over 1/2	Over 12.7	6
Oxygen Cutting: -Light -Medium -Heavy	Under 1	Under 25	3
	1 to 6	25 to 150	4
	Over 6	Over 150	5

* As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the work piece.

Personal Protective Equipment (PPE) Survey and Analysis

Department: _____ Location: _____

Job Classification: _____ Operation/Process: _____

Person performing assessment: _____ Title: _____

THE FOLLOWING HAZARDS HAVE BEEN NOTED

Part of body	Hazard	Required PPE	Notes
Hands	<input type="checkbox"/> Penetration – sharp objects	<input type="checkbox"/> Leather/cut resistant gloves	
	<input type="checkbox"/> Penetration – animal bites	<input type="checkbox"/> Leather/cut resistant gloves	
	<input type="checkbox"/> Penetration – rough objects	<input type="checkbox"/> General purpose work gloves	
	<input type="checkbox"/> Penetration – knives	<input type="checkbox"/> Metal mesh, Kevlar, steel mesh, heavy leather	
	<input type="checkbox"/> Chemicals	<input type="checkbox"/> Chemical resistant gloves <input type="checkbox"/> Type _____	
	<input type="checkbox"/> Extreme cold	<input type="checkbox"/> Insulated gloves	
	<input type="checkbox"/> Extreme heat	<input type="checkbox"/> Heat flame resistant gloves	
	<input type="checkbox"/> Blood	<input type="checkbox"/> Nitrile gloves	
	<input type="checkbox"/> Electrical shock	<input type="checkbox"/> Insulated rubber gloves <input type="checkbox"/> Type _____	
	<input type="checkbox"/> Product contamination	<input type="checkbox"/> Plastic, cotton, nylon	
	<input type="checkbox"/> Other	<input type="checkbox"/> Other _____	
Eyes and Face	<input type="checkbox"/> Impact-flying objects, chips, sand or dirt	<input type="checkbox"/> Safety glasses w/side shield, goggles w/face shield	
	<input type="checkbox"/> Nuisance dust	<input type="checkbox"/> Unvented chemical goggles	
	<input type="checkbox"/> UV light welding, cutting, torch brazing or soldering	<input type="checkbox"/> Welding goggles <input type="checkbox"/> Welding helmet/shield w/safety glasses & side shields	
	<input type="checkbox"/> Chemical – splashing liquid	<input type="checkbox"/> Chemical goggles/face shield	
	<input type="checkbox"/> Chemical – irritating mists	<input type="checkbox"/> Unvented chemical goggles	
	<input type="checkbox"/> Hot sparks – grinding	<input type="checkbox"/> Safety glasses w/side shields <input type="checkbox"/> Safety goggles w/side shields	
	<input type="checkbox"/> Splashing molten metal	<input type="checkbox"/> Safety goggles w/face shield	
	<input type="checkbox"/> Glare/high intensity light	<input type="checkbox"/> Shaded safety glasses	
	<input type="checkbox"/> Laser operations	<input type="checkbox"/> Laser goggles or glasses	
	<input type="checkbox"/> Other	<input type="checkbox"/> Other _____	
Ears	<input type="checkbox"/> Exposure to noise levels >85 dBA 8 hour TWA	<input type="checkbox"/> Ear muffs or plugs	
	<input type="checkbox"/> Exposure to noise levels >105 dBA 8 hour TWA	<input type="checkbox"/> Ear muffs AND plugs	
	<input type="checkbox"/> Exposure to sparks	<input type="checkbox"/> Leather	
	<input type="checkbox"/> Other	<input type="checkbox"/> Other _____	

Respiratory System	<input type="checkbox"/> For comfort for nuisance dust/mist	<input type="checkbox"/> Disposable dust/mist mask	
	<input type="checkbox"/> Welding fumes	<input type="checkbox"/> Respirator w/P100 filter	
	<input type="checkbox"/> Asbestos	<input type="checkbox"/> Respirator w/P100 filter	
	<input type="checkbox"/> Pesticides	<input type="checkbox"/> Respirator w/cartridges as per pesticide label	
	<input type="checkbox"/> Paint Spray	<input type="checkbox"/> Respirator w/OV/P100	
	<input type="checkbox"/> Organic Vapors	<input type="checkbox"/> Respirator with organic vapor cartridges	
	<input type="checkbox"/> Acid gases	<input type="checkbox"/> Respirator w/acid gas cartridges	
	<input type="checkbox"/> Oxygen deficient/toxic or IDLH atmosphere	<input type="checkbox"/> SCBA or type C airline respirator	
Feet	<input type="checkbox"/> Impact-heavy objects	<input type="checkbox"/> Steel toe safety shoes	
	<input type="checkbox"/> Compression-rolling or pinching objects/vehicles	<input type="checkbox"/> Leather boots or safety shoes w/metatarsal (top of foot) guards	
	<input type="checkbox"/> Slippery or wet surfaces	<input type="checkbox"/> Slip resistant soles	
	<input type="checkbox"/> Electrical hazards	<input type="checkbox"/> Electrical hazard shoes	
	<input type="checkbox"/> Explosive atmosphere	<input type="checkbox"/> Conductive footwear	
	<input type="checkbox"/> Penetration-sharp objects	<input type="checkbox"/> Puncture resistant soles	
	<input type="checkbox"/> Penetration-chemical	<input type="checkbox"/> Chemical resistant boots/covers	
	<input type="checkbox"/> Splashing-chemical	<input type="checkbox"/> Rubber boots/closed top shoes	
	<input type="checkbox"/> Exposure to extreme cold	<input type="checkbox"/> Insulated boots or shoes	
	<input type="checkbox"/> other	<input type="checkbox"/> other	
Head	<input type="checkbox"/> Object from overhead	<input type="checkbox"/> type I ANSI Z89.1-1997	
	<input type="checkbox"/> Impact to side of head	<input type="checkbox"/> Type II ANSI Z89.1-1997	
	<input type="checkbox"/> Struck by falling object	Hard Hat Class <input type="checkbox"/> Class A/G <input type="checkbox"/> Class B/E	
	<input type="checkbox"/> Struck against fixed object		
	<input type="checkbox"/> Electrical contact with exposed wires/conductors		
	<input type="checkbox"/> Special circumstances – no electrical protection	<input type="checkbox"/> Class C	
	<input type="checkbox"/> Hair entanglement, open flames	<input type="checkbox"/> Cap, hairnet, bandana	
	<input type="checkbox"/> Other	<input type="checkbox"/> Other	
Body	<input type="checkbox"/> Impact-flying objects	<input type="checkbox"/> Long sleeves/apron/coat	
	<input type="checkbox"/> Moving vehicles	<input type="checkbox"/> Traffic vest	
	<input type="checkbox"/> Penetration-sharp objects	<input type="checkbox"/> Cut resistant sleeve, wristlets	
	<input type="checkbox"/> Penetration-knives	<input type="checkbox"/> Metal mesh, Kevlar, steel mesh, heavy leather sleeves, wristlets, aprons	
	<input type="checkbox"/> Electrical-static discharge	<input type="checkbox"/> Static control coats/coveralls	
	<input type="checkbox"/> Hot metal or sparks	<input type="checkbox"/> Flame resistant jacket/pants, aluminized jackets/pants	
	<input type="checkbox"/> Chemical	<input type="checkbox"/> Lab coat or apron/sleeves	
	<input type="checkbox"/> Unprotected elevated walking/working surface	<input type="checkbox"/> Body harness, lanyard and connector	
	<input type="checkbox"/> Other	<input type="checkbox"/> Other	

Personal Protective Equipment Hazard Assessment Certification



Job title _____
 Department _____
 Location/Worksite _____
 Employee Name(s) _____

Date _____
 Supervisor _____
 Signature _____

Tasks, Job Classifications or Workstation	Potential Hazard	PPE required (Yes/No)	Type of PPE Required

Central Michigan University
Certification of Personal Protective Equipment Training

I _____ certify that the following affected employees have received and understood personal protective equipment (PPE)
(print full name)

training, which includes the following: when PPE is necessary; what PPE is necessary; how to properly don, doff, adjust, and wear PPE; the limitations of the PPE; and the proper care, maintenance, useful life, and disposal of the PPE. Each of the affected employees has demonstrated an understanding of the above and an ability to use the PPE properly. This training is in compliance with 29 CFR 1910.132 (f).

Name	Signature	Equipment Type	Date of Training