

**APPENDIX C
TABLE 1
EYE AND FACE PROTECTOR SELECTION**

This guide is not intended to be the sole reference in selecting the proper eye and face protector.

Care shall be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of the hazards must be provided.

ACTIVITY AND ASSESSMENT	PROTECTOR CATEGORY AND STYLES	LIMITATIONS	NOT RECOMMENDED
IMPACT			
<p>Chipping, grinding, machining, masonry work, riveting, and sanding.</p> <p>Flying fragments, objects, large chips, particles, sand, dirt, etc.</p>	<p>Spectacles, goggles: B, C, D, E, F, G, H, I, J, K, L. For Severe exposure add N. Respirators, R, T.</p> <p>Faceshields shall only be worn over spectacles or goggles.</p> <p>Persons whose vision requires the use of prescription lenses shall wear either protective devices fitted with prescription lenses or protective devices designed to be worn over regular prescription eyewear.</p> <p>Wearers of contact lenses shall also be required to wear appropriate spectacles or goggles depending on the specific hazard. Dusty and/or chemical environments may represent an additional hazard to contact lens wearers. Wearing of contact lenses under an R respirator is permitted.</p> <p>Goggles, helmets and faceshield windows that bear the marking "Z-87+" comply with the High Impact Test Requirements. Those with "Z-87" markings comply only with Basic Impact Testing Requirements. Spectacle lenses that are marked with the manufacturers logo and a "+" sign comply with the High Impact Test Requirements. Those spectacle lenses marked with the manufacturer's logo and no "+" comply only with Basic Impact Testing Requirements. (It is important during the selection process to remember that different product categories are tested at different levels of impact resistance. Goggles are tested at a higher level of impact than spectacles and face shields are tested at a higher level than goggles.)</p> <p>The Z-87-2 frame marking indicates the frame meets high impact requirements with a minimum lens thickness of 2mm.</p>	<p>Protective devices do not provide unlimited protection.</p> <p>Note: Caution should be exercised in the use of metal frame protective devices in electrical hazard areas. Metal frame protective devices could potentially cause electrical shock and electrical burns through contact with, or thermal burns from exposure to the hazards of electrical energy, which include radiation from accidental arcs.</p> <p>Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleaning may be required.</p>	<p>Protectors that do not provide protection from side exposure.</p> <p>Filter or tinted lenses that restrict light transmittance, unless it is determined that a glare hazard exists. Refer to OPTICAL RADIATION.</p> <p>Use of faceshields alone, without spectacles or goggles</p>

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ACTIVITY AND ASSESSMENT	PROTECTOR CATEGORY AND STYLES	LIMITATIONS	NOT RECOMMENDED
HEAT			
Furnace operations, pouring, casting, hot dipping, gas cutting, and welding.	Note: Operations involving heat may also involve optical radiation. (See electric arc, gas, and glare under Optical Radiation below.) Protection from both hazards shall be provided. Faceshields shall only be worn over Spectacles or goggles.	Spectacles, cup and cover type goggles do not provide unlimited facial protection.	Protectors that do not provide protection from side exposure.
Hot Sparks	Goggles, spectacles: B, C, D, E, F, G, H, I, J, K, L. For severe exposure add N. Respirators R, T.	Operations involving heat may also involve optical radiation.	Use of faceshields alone, without spectacles or goggles.
Splash from molten metals	Faceshields worn over goggles H, K. Respirators R, T or S, U if optical Radiation hazard exists.	Protection from both hazards shall be provided.	
High temperature exposure	Screen faceshields, Reflective faceshields over spectacles or goggles.		
CHEMICAL			
Acid and chemicals handling, degreasing, plating. Splash and irritating mists.	Indirect vented: goggles, eyecup and cover types: G, H, K. For severe exposure add N. Respirators R, T. Irritating Mist: Special purpose goggles: G. Cover goggle – No ventilation. Respirators R, T.	Provides protection from splash entry with adequate ventilation. Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleaning may be required.	Spectacles, welding, helmets, or handshields.
DUST			
Woodworking, buffing, general dusty conditions. Nuisance dust.	Goggles, eyecup and cover types: G, H, K. Respirators R, T.	Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleaning may be required.	

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ACTIVITY AND ASSESSMENT	PROTECTOR CATEGORY AND STYLES		LIMITATIONS	NOT RECOMMENDED
OPTICAL RADIATION				
WELDING: Electric Arc	Note: Welding helmets or handshields shall be used only over spectacles or goggles.		Protection from optical radiation is directly related to filter lens density. Select the darkest shade that allows adequate tasks performance.	Protectors that do not provide protection from optical radiation.
Viewing electric arc furnaces and boilers	TYPICAL FILTER LENS SHADE: 10-14	PROTECTORS: Welding helmets or Welding Shields: O, P, Q Respirators S, U.	Note: Filter lenses shall meet the requirements for shade designations in GI Part 33 Table 1.	Note: Filter lenses shall meet the requirements for shade designations in GI Part 33 Table 1.
WELDING: Gas, and viewing gas-fired furnaces and boilers	TYPICAL FILTER LENS SHADE: 4-8	PROTECTORS: Welding goggles, Helmets. Welding Face shields over spectacles or goggles: J, K, L, M, N, O, P, Q or Respirators S, U.	Note: Faceshields and welding helmets shall only be worn over spectacles or goggles.	Use of welding helmets or faceshields alone, without spectacles or goggles.
CUTTING	TYPICAL FILTER LENS SHADE: 3-6	PROTECTORS: Welding goggles, Helmets. Welding face shields: J, K, L, M, N, O, P, Q or Respirators S, U.		
TORCH BRAZING	TYPICAL FILTER LENS SHADE: 3-4	PROTECTORS: Welding goggles, Helmets. Welding face shields: J, K, L, M, N, O, P, Q or Respirators S, U.		
TORCH SOLDERING	TYPICAL FILTER LENS SHADE: 1.5-3	PROTECTORS: Spectacles or Welding Faceshield over spectacles: B, C, D, E, F, N or Respirators S, U.		
GLARE	Spectacle: A, B, Faceshields N over spectacles or goggles.		Shaded or Special Purpose lenses, as suitable.	