

WAC 296-155-215 Eye and face protection. (1) General.

(a) Employees must use eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents.

(b) Eye and face protection equipment required by this part must meet the requirements specified in American National Standards Institute, Z87.1-1968, Practice for Occupational and Educational Eye and Face Protection.

(c) Employees whose vision requires the use of corrective lenses in spectacles, when required by this regulation to wear eye protection, must be protected by goggles or spectacles of one of the following types:

(i) Spectacles whose protective lenses provide optical correction;

(ii) Goggles that can be worn over corrective spectacles without disturbing the adjustment of the spectacles.

(iii) Goggles that incorporate corrective lenses mounted behind the protective lenses.

(d) Face and eye protection equipment must be kept clean and in good repair. The use of this type equipment with structural or optical defects must be prohibited.

(e) Table C-1 must be used as a guide in the selection of face and eye protection for the hazards and operations noted.

(f) Protectors must meet the following minimum requirements:

(i) They must provide adequate protection against the particular hazards for which they are designed.

(ii) They must be reasonably comfortable when worn under the designated conditions.

(iii) They must fit snugly and must not unduly interfere with the movements of the wearer.

(iv) They must be durable.

(v) They must be capable of being disinfected.

(vi) They must be easily cleanable.

(g) Every protector must be distinctly marked to facilitate identification only of the manufacturer.

(h) When limitations or precautions are indicated by the manufacturer, they must be transmitted to the user and care taken to see that such limitations and precautions are strictly observed.

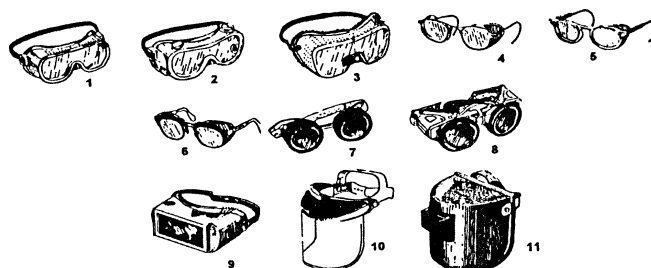


TABLE C-1

EYE AND FACE PROTECTION SELECTION GUIDE

1. GOGGLES, flexible fitting, regular ventilation
2. GOGGLES, flexible fitting, hooded ventilation
3. GOGGLES, cushioned fitting, rigid body
- *4. SPECTACLES, metal frame, with sideshields
- *5. SPECTACLES, plastic frame with sideshields

- *6. SPECTACLES, metal-plastic frame, with sideshields
 - **7. WELDING GOGGLES, eyecup type, tinted lenses (illustrated)
 - 7A. CHIPPING GOGGLES, eyecup type, clear safety lenses (not illustrated)
 - **8. WELDING GOGGLES, coverspec type tinted lenses (illustrated)
 - 8A. CHIPPING GOGGLES, coverspec type, clear safety lenses (not illustrated)
 - **9. WELDING GOGGLES, coverspec type, tinted plate lens
 - 10. FACE SHIELD (available with plastic or mesh window)
 - 11. WELDING HELMETS
- *Nonside shield spectacles are available for limited hazard use requiring only frontal protection.
 **See Table C-2 in (2) of this section, Filter lens shade numbers for protection against radiant energy.

APPLICATIONS		
OPERATION	HAZARDS	RECOMMENDED PROTECTORS: Underscored Numbers Signify Preferred Protection
ACETYLENE-BURNING ACETYLENE-CUTTING ACETYLENE-WELDING	SPARKS, HARMFUL RAYS, MOLTEN METAL, FLYING PARTICLES	<u>7</u> , <u>8</u> , <u>9</u>
CHEMICAL HANDLING	SPLASH, ACID BURNS, FUMES	<u>2</u> , 10 (for severe exposure add <u>10</u> over 2)
CHIPPING	FLYING PARTICLES	<u>1</u> , <u>3</u> , 4, 5, 6, <u>7A</u> , <u>8A</u>
ELECTRIC (ARC) WELDING	SPARKS, INTENSE RAYS, MOLTEN METAL	<u>9</u> , <u>11</u> (11 in combination with 4, 5, 6, in tinted lenses, advisable)
FURNACE OPERATIONS	GLARE, HEAT, MOLTEN METAL	<u>7</u> , <u>8</u> , <u>9</u> (for severe exposure add <u>10</u>)
GRINDING-LIGHT	FLYING PARTICLES	<u>1</u> , <u>3</u> , <u>4</u> , <u>5</u> , <u>6</u> , 10
GRINDING-HEAVY	FLYING PARTICLES	<u>1</u> , <u>3</u> , <u>7A</u> , <u>8A</u> (for severe exposure add 10)
LABORATORY	CHEMICAL SPLASH, GLASS BREAKAGE	<u>2</u> (10 when in combination with <u>4</u> , <u>5</u> , <u>6</u>)
MACHINING	FLYING PARTICLES	<u>1</u> , <u>3</u> , <u>4</u> , <u>5</u> , <u>6</u> , 10
MOLTEN METALS	HEAT, GLARE, SPARKS, SPLASH	<u>7</u> , <u>8</u> (10 in combination with <u>4</u> , <u>5</u> , <u>6</u> , in tinted lenses)
SPOT WELDING	FLYING PARTICLES, SPARKS	<u>1</u> , <u>3</u> , <u>4</u> , <u>5</u> , <u>6</u> , 10

(2) Protection against radiant energy. (a) Selection of shade numbers for welding filter. Table C-2 must be used as a guide for the selection of the proper shade numbers of filter lenses or plates used in welding. Shades more dense than those listed may be used to suit the individual's needs.

TABLE C-2

FILTER LENS SHADE NUMBERS FOR PROTECTION AGAINST RADIANT ENERGY

Welding Operation	Shade number
Shielded metal-arc welding 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes.	10
Gas-shielded arc welding (nonferrous) 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes.	11

Welding Operation	Shade number
Gas-shielded arc welding (ferrous) 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes.	12
Shielded metal-arc welding 3/16-, 7/32-, 1/4-inch diameter electrodes.	12
5/16-, 3/8-inch diameter electrodes.	14
Atomic hydrogen welding.	10-14
Carbon-arc welding.	14
Soldering.	2
Torch brazing.	3 or 4
Light cutting, up to 1 inch.	3 or 4
Medium cutting, 1 inch to 6 inches.	4 or 5
Heavy cutting, over 6 inches.	5 or 6
Gas welding (light), up to 1/8-inch.	4 or 5
Gas welding (medium), 1/8-inch to 1/2-inch.	5 or 6
Gas welding (heavy), over 1/2-inch.	6 or 9

(b) Laser protection.

(i) Employees whose occupation or assignment requires potentially hazardous exposure (see WAC 296-62-09005(4)) to laser radiation must wear suitable laser safety goggles which will protect for the specific wavelength of the laser and be of optical density (O.D.) adequate for the energy involved. Table C-3 lists the maximum power or energy density for which adequate protection is afforded by glasses of optical densities from 5 through 8.

TABLE C-3

SELECTING LASER SAFETY GLASS

INTENSITY		ATTENUATION	
CW maximum power density (watts/cm ²)	Optical density (O.D.)		Attenuation factor
10 ⁻²	5		10 ⁵
10 ⁻¹	6		10 ⁶
1.0	7		10 ⁷
10.0	8		10 ⁸

Output levels falling between lines in this table must require the higher optical density.

(ii) All protective goggles must bear a label identifying the following data:

- (a) The laser wavelengths for which use is intended;
- (b) The optical density of those wavelengths.
- (c) The visible light transmission.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-215, filed 4/19/16, effective 5/20/16. Statutory Authority: Chapter 49.17 RCW. WSR 94-15-096 (Order 94-07), § 296-155-215, filed 7/20/94, effective 9/20/94. Statutory Authority: RCW 49.17.040 and 49.17.050. WSR 85-01-022 (Order 84-24), § 296-155-215, filed 12/11/84; Order 74-26, § 296-155-215, filed 5/7/74, effective 6/6/74.]