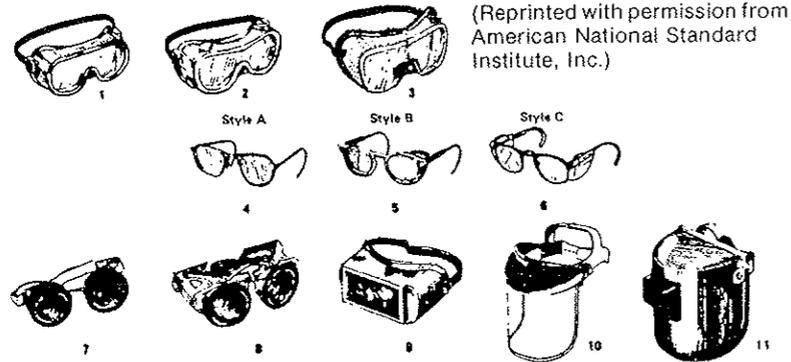


**D. Selection Chart for Eye and Face Protectors for Use in Industry, Schools, and Colleges**

This Selection Chart offers general recommendations only. Final selection of eye and face protective devices is the responsibility of management and safety specialists. (For laser protection, refer to American National Standard for Safe Use of Lasers, ANSI Z136.1.)



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- 1. GOGGLES, Flexible Fitting, Regular Ventilation
- 2. GOGGLES, Flexible Fitting, Hooded Ventilation
- 3. GOGGLES, Cushioned Fitting, Rigid Body
- \*4. SPECTACLES, without Sideshields
- 5. SPECTACLES, Eyecup Type Sideshields
- 6. SPECTACLES, Semi-/Flat-Fold 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, Plastic or Mesh Window (see caution note)
- 11. WELDING HELMET

\* Non-sideshield spectacles are available for limited hazard use requiring only frontal protection.

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

**CAUTION:**

- Face shields alone do not provide adequate protection.
- Plastic lenses are advised for protection against molten metal splash.
- Contact lenses, of themselves, do not provide eye protection in the industrial sense and shall not be worn in a hazardous environment without appropriate covering safety eyewear.

E. Sanitation Requirements: When eye safety devices are to be shared by students they shall be cleaned and/or disinfected in one of the following ways:

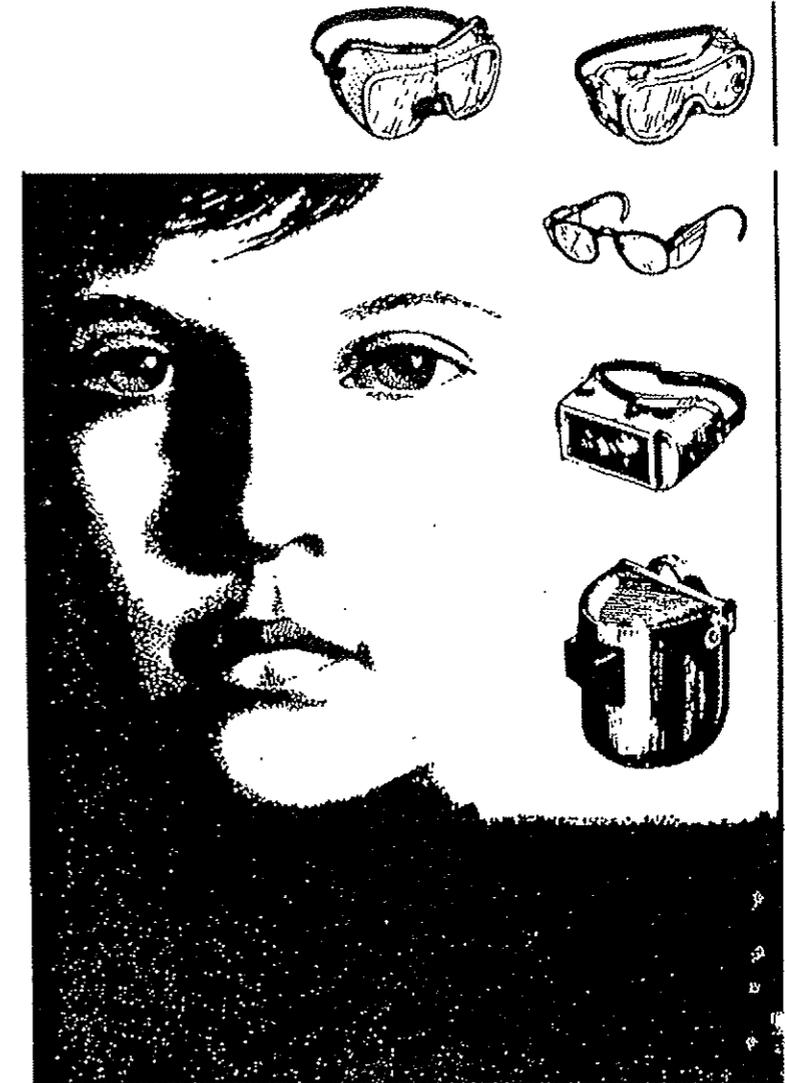
- a). Ultra violet disinfecting equipment, or
- b). Pressurized spray-type disinfecting and bactericidal solution, or
- c). Thoroughly washed with soap and water before being used by another individual

**III. Resources**

- A. Occupational Safety & Health Administration  
[www.osha.gov](http://www.osha.gov)
- B. American National Standards Institute  
[www.ansi.org](http://www.ansi.org)
- C. Prevent Blindness America  
[www.preventblindness.org](http://www.preventblindness.org)

# Secondary Education EYE AND FACE PROTECTIVE DEVICES

As required by Neb. Rev. Stat. 79-715



## INTRODUCTION

The 1984 Nebraska Legislature passed into law a requirement for the wearing of eye and face protective devices. This brochure provides a copy of the Statute and some information which may help interpret the law and clarify terms as they relate to industrial quality eye and face protective devices.

### I. Neb. Rev. Stat. 79-715

AN ACT relating to education to require that certain eye protective devices be worn as prescribed to define a term; and to provide duties for the Commissioner of Education,

Be it enacted by the people of the State of Nebraska, Section 1, (l) Every student and teacher in schools or other educational institutions shall wear appropriate industrial-quality eye protective devices at all times while participating in or observing the following courses of instruction

(a) Vocational, technical, industrial arts, chemical, or chemical-physical, involving exposure to:

- (i) Hot molten metals or other molten materials;
- (ii) Milling, sawing, turning, shaping, cutting, grinding, or stamping of any solid materials;
- (iii) Heat treatment, tempering, kiln firing of any metal or other materials;
- (iv) Gas or electric arc welding or other forms of welding processes;
- (v) Repair or servicing of any vehicle; or
- (vi) Caustic or explosive materials; and

(b) Chemical, physical, or, combined chemical-physical laboratories involving caustic or explosive materials, hot liquids or solids, injurious radiations, or other hazards not enumerated.

Such devices shall be furnished by the school or educational institution for all students, teachers and visitors to shops and laboratories of such institutions,

(2) For purposes of this section, unless the context otherwise requires, industrial-quality eye protective devices shall mean devices which meet the standard of the American National Standard Practice for Occupational and Educational Eye and Face Protection, **Z 87.1-1979** as approved by the American National Standards Institute, Inc,

(3) The Commissioner of Education shall prepare and circulate to each public and private postsecondary educational institution in this state instructions and recommendations for implementing the eye safety provisions of this section,

### II. Explanatory Notes

A, Administrators and educators may be confused as to what is meant by industrial-quality eye and face protective devices. This standard is defined in the American National Standard Practice for Occupational and Educational Eye and Face Protection **Z 87.1-1979**. Since this standard is long and sometimes confusing the following information is provided to assist in interpreting the new requirement.

B. Ways to identify industrial-quality eye and face protection devices.

1. In order for spectacles to comply with the standard they shall
  - a). have the manufacturer's trademark on both lenses,
  - b). bear the manufacturer's trademark and a **Z 87** logo on the frame fronts,
  - c). have the manufacturer's trademark, a **Z 87** logo and the overall length printed on the temples,
2. In order for **chemical goggles** to comply with the standard they shall
  - a). bear the manufacturer's trademark on the lens, and,
  - b). bear the manufacturer's trademark and the **Z 87** logo on the frame.

3, In order for the **welding helmets, hand shields** and **face shields** to comply with the standard they shall bear

- a), The manufacturer's trademark on the lens,
- b). the **Z 87** logo on the headgear, and
- c), the shade and impact designation on the helmet only,

4, In order for the **laser spectacles** to comply they shall

- a). meet the ANSI Standard **Z 136.1** 1976, and
- b.) bear a label identifying the
  - 1), laser wave length,
  - 2). optical density, and
  - 3). visible light transmission.

Note: Instructors should check with the laser spectacle manufacturer regarding recommendations for the lenses they sell.

C, Contact lenses/street wear glasses considerations:

1, Students wearing contact lenses and/or "street wear" glasses should be informed that these sight correction glasses do not provide adequate eye protection in the industrial sense,

2. The Food and Drug Administration approved impact-resistant (RX) lenses **do not** meet the ANSI Z 87.1-1979 standards. These (RX) lenses and/or glasses must be covered by additional goggles or shields which do meet the industrial standards.

3, Glasses containing photo-grey or photographic {photo chromic} lenses are not an acceptable substitute for industrial quality safety glasses. The **ANSI Z 87.1-1979** standard specifically states that these lenses **may not** be worn in lieu of or in conjunction with an approved eye protection device.