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.

(Reprinted with permission from American National Standard Institute, Inc.)

<table>
<thead>
<tr>
<th>APPLICATIONS</th>
<th>OPERATIONS</th>
<th>HAZARDS</th>
<th>PROTECTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETYLENE-BURNING</td>
<td>SPARKS, FLAMMABLE VAPORS</td>
<td>7, 8, 9</td>
<td></td>
</tr>
<tr>
<td>ACETYLENE-WELDING</td>
<td>SPARKS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEMICAL HANDLING</td>
<td>SULFUR, ACID BURNS, FUMES</td>
<td>2 (For extreme exposure add 15)</td>
<td></td>
</tr>
<tr>
<td>CHIPPING</td>
<td>FLYING PARTICLES</td>
<td>1, 3, 4, 6, 7A, 7A</td>
<td></td>
</tr>
<tr>
<td>ELECTRIC ARC WELDING</td>
<td>SPARKS, ENERGIZED RAYS, WOLFER METAL</td>
<td>11 (In combination with 4, 5, 6, 13, 14, 16)</td>
<td></td>
</tr>
<tr>
<td>FURNACE OPERATIONS</td>
<td>GLARE, MOLTEN METAL</td>
<td>7, 8, 9 (For severe exposure add 15)</td>
<td></td>
</tr>
<tr>
<td>GRINDING</td>
<td>FLYING PARTICLES</td>
<td>1, 3, 5, 6 (For severe exposure add 15)</td>
<td></td>
</tr>
<tr>
<td>SHAPING, HEAVY</td>
<td>FLYING PARTICLES</td>
<td>1, 3, 7A, 8A (For severe exposure add 15)</td>
<td></td>
</tr>
<tr>
<td>LABORATORY</td>
<td>CHEMICAL, SPLASH, GLASS BREAKAGE</td>
<td>2 (In combination with 9, 10)</td>
<td></td>
</tr>
<tr>
<td>MACHINING</td>
<td>FLYING PARTICLES</td>
<td>1, 3, 5, 6 (For severe exposure add 15)</td>
<td></td>
</tr>
<tr>
<td>WELDER METALS</td>
<td>HEAT, SPARK, SPLASH, FLYING PARTICLES</td>
<td>7, 8, 9 (In combination with 3, 5, 6, 13)</td>
<td></td>
</tr>
<tr>
<td>SPOT WELDING</td>
<td>FLYING PARTICLES, SPARKS</td>
<td>1, 3, 4, 5, 6 (For severe exposure add 15)</td>
<td></td>
</tr>
</tbody>
</table>

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

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

B. American National Standards Institute
   www.ansi.org

C. Prevent Blindness America
   www.preventblindness.org

Postsecondary Education

EYE AND FACE

PROTECTIVE DEVICES

As required by Neb. Rev. Stat. 85-901

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.
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.


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, that every student and teacher in colleges, universities, or other postsecondary 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, 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 may be furnished by the postsecondary educational institutions for all students and teachers, purchased and sold at cost to students and teachers, or made available for a moderate rental fee and shall be furnished for all 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 chronic] 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.