

# Personal Protective Equipment Selection of Eye and Face Protection

| Hazard  | Activities                            |                              |                           |                             |                |             |      |                             |
|---|---------------------------------------|------------------------------|---------------------------|-----------------------------|----------------|-------------|------|-----------------------------|
|   |                                       | Spectacles with side shields | Direct ventilated goggles | Indirect ventilated goggles | Welding helmet | Face shield | Hood | Hand shield plus spectacles |
| <b>Group A</b><br>Flying objects                            | Chipping/Drilling/Scaling             | ■                            | ■                         | ■                           |                | ★           |      |                             |
|   | Grinding/Polishing/Buffering          | ■                            | ▲                         | ▲                           |                | ★           |      |                             |
|   | Riveting/Punching/Shearing            | ■                            | ■                         | ■                           |                |             |      |                             |
|   | Hammer mills/Crushing                 | ■                            | ■                         | ■                           |                |             |      |                             |
|   | Heavy sawing/planing                  |                              | ▲                         | ▲                           |                | ★           |      |                             |
|   | Wire and strip handling               | ■                            | ■                         | ■                           |                |             |      |                             |
|   | Hammering/Unpacking/Nailing           | ■                            | ■                         | ■                           |                | ★           |      |                             |
| <b>Group B</b><br>Flying particles/<br>Dust/Wind            | Punch press/Lathe work                | ■                            | ■                         | ■                           |                | ★           |      |                             |
|   | Woodworking/Sanding                   | ■                            | ▲                         | ▲                           |                | ★           |      |                             |
|   | Light metal working/machining         | ■                            | ▲                         | ▲                           |                | ★           |      |                             |
|   | Exposure to wind/dust                 | ■                            | ▲                         | ▲                           |                |             |      |                             |
|   | Resistance welding                    | ●                            | ●                         | ●                           |                | ★           |      |                             |
|   | Sand/cement handling                  |                              | ▲                         | ▲                           |                |             | ★    |                             |
|   | Painting                              |                              | ▲                         | ▲                           |                | ★           | ★    |                             |
| <b>Group C</b><br>Heat/Glare/Sparks/<br>Molten metal splash | Plastering/Concrete work              | ■                            | ▲                         | ▲                           |                | ★           |      |                             |
|   | Material batching/mixing              | ■                            | ▲                         | ▲                           |                | ★           |      |                             |
|   | Working with molten metal             |                              | ▲+                        | ▲+                          |                | ★           |      |                             |
|   | Soldering/Brazing                     | ●                            | ●                         | ●                           |                | ★           |      |                             |
| <b>Group D</b><br>Chemical splash                           | Spot/stud welding                     |                              | ●                         | ●                           |                | ★           |      |                             |
|   | Hot dipping                           |                              | ▲+                        | ▲+                          |                | ★           |      |                             |
|   | Handling acid/alkali                  |                              | ▲+                        | ▲+                          |                | ★           | ★    |                             |
|   | De-greasing                           |                              | ▲                         | ▲                           |                | ★           |      |                             |
|   | Spraying chemicals                    |                              | ▲+                        | ▲+                          |                | ★           | ★    |                             |
| <b>Group E</b><br>Abrasive blasting                         | Glass breakage                        |                              | ■+                        | ■+                          |                | ★           |      |                             |
|   | Handling liquid bitumen               |                              | ▲+                        | ▲+                          |                | ★           |      |                             |
|   | Sandblasting                          |                              | ▲                         | ▲                           |                |             | ★    |                             |
| <b>Group F</b><br>Glare/Stray light                         | Shot blasting                         |                              |                           |                             |                |             | ★    |                             |
|   | Shotcreting                           |                              |                           |                             |                |             | ★    |                             |
|   | Reflection/Sunlight                   | ●                            | ●                         | ●                           |                |             |      |                             |
|   | Reflected welding flash               | ●                            | ●                         | ●                           |                |             |      |                             |
| <b>Group G</b><br>Injurious optical radiation               | Metal pouring/Furnace work            | ●+                           | ●+                        | ●+                          |                |             |      |                             |
|   | Spot/stud welding                     |                              | ●                         | ●                           |                | ★           |      |                             |
|   | Gas cutting/welding                   |                              | ●                         | ●                           |                | ●           |      |                             |
| <b>Group H</b><br>Injurious optical radiation               | Furnace work                          | ●+                           | ●+                        | ●+                          |                |             |      |                             |
|   | Electric arc welding                  |                              |                           |                             | ●◆             |             |      | ●                           |
|   | Heavy gas cutting                     |                              |                           |                             | ●◆             |             |      | ●                           |
|   | Plasma spraying/cutting               |                              |                           |                             | ●◆             |             |      | ●                           |
|   | Inert gas shielded arc welding        |                              |                           |                             | ●◆             |             |      | ●                           |
| <b>Group I</b><br>Laser Radiation                           | Atomic hydrogen welding               |                              |                           |                             | ●◆             |             |      | ●                           |
|   | Laser radiation                       |                              | ▶                         | ▶                           |                |             |      |                             |
|   | Laser cutting                         |                              | ▶                         | ▶                           |                |             |      |                             |
|   | Laser surgery                         |                              | ▶                         | ▶                           |                |             |      |                             |
| <b>Group J</b><br>Electric Arc Protection                   | Laser etching                         |                              | ▶                         | ▶                           |                |             |      |                             |
|   | Electric Arch Flash                   |                              | ∖                         | ∖                           |                | ∖           | ∖    |                             |
|   | Electrical installation               |                              | ∖                         | ∖                           |                | ∖           | ∖    |                             |
|   | Maintenance and trouble shooting      |                              | ∖                         | ∖                           |                | ∖           | ∖    |                             |
| <b>Group J</b><br>Electric Arc Protection                   | Disconnecting live electrical systems |                              | ∖                         | ∖                           |                | ∖           | ∖    |                             |

This chart is adapted from Canadian Standards Association (CSA) found in "Eye and face protectors, Z94.3-15".  
 CSA Z94.3-15 states that Class 3, 4 and 5 protectors, or welding protection, shall be used only in conjunction with Class 1 or 2 protectors (spectacles or goggles).

**LEGEND**

- For impact
- For radiation
- ▲ For dust/splash
- ★ Other option
- + Must be worn with face shield
- ◆ Must be worn with spectacles or goggles
- ▶ Laser radiation
- ∖ Electric arc production