

UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY

APPENDIX 2

Example of Task Analysis & Minimum Requirements for Eye/Face Protection

Appropriate eye and face protection, such as safety glasses, goggles, and face shields, must be used to protect against the hazards associated with flying particles, molten metal, liquid chemicals, acids and caustic liquids, chemical gases and vapors, or potentially injurious light radiation from welding or laser operations.

Task Example	Hazardous Activities	Minimum PPE; one or more of:
Do employees perform tasks, or work near employees who perform tasks, that might produce airborne dust or flying particles?	Sawing, cutting, drilling, sanding, grinding, hammering, chopping, abrasive blasting, punch press operations	Chemical goggles or safety glasses with side shields and full-face shield
Do employees perform tasks, or work near employees who perform tasks, that might produce airborne particles?	Pressurized spraying or high speed pressure cleaning	Safety glasses with side shields or safety glasses with side shields covered by a full face shield
Do employees handle, or work near employees using hazardous liquid chemicals, cryogenic materials or encounter blood splashes?	Pouring, mixing, painting, cleaning, siphoning, dip tank operations, battery charging, dental and health care services	Chemical goggles or safety glasses with side shields covered by a full face shield
Are employees' eyes exposed to other potential physical or chemical irritants?	Installing fiberglass insulation, compressed air or gas operating, etc.	Safety glasses with side shields
Are employees exposed to intense light?	Welding, cutting, etc.	Safety glasses worn under appropriate welding helmet, tinted safety glasses ⁽¹⁾ with side shield
Are employees exposed to lasers?	Laser operations	Eye protection appropriate for specific laser ⁽²⁾
Are employees using spray containers	Cleaning/lubricating with sprays	Safety glasses, goggles, face shield
Are employees handling chemicals	Splash, acid burns, vapors	Fume hood, local ventilation, face shield for severe exposure

⁽¹⁾ The intensity of visible light and radiant energy produced by welding operations varies depending on the task, the electrode size, and the arc current. Workers involved in welding, cutting, and brazing operations must use appropriate welding protection depending on specific welding operations. 1910.133

Welding helmets are secondary protectors intended to shield the eyes and face from optical radiation, heat, and impact. Use welding helmets *in addition* to primary protection such as safety spectacles or goggles to provide adequate protection.

⁽²⁾ Determine the maximum power density, or intensity, lasers produce when workers are exposed to laser beams. Based on this knowledge, select lenses that protect against the maximum intensity. The selection of laser protection should depend upon the lasers in use and the operating conditions. Workers with exposure to laser beams must be furnished suitable laser protection. [1910.133 Those working with lasers and exposed to danger from impact must utilize laser eye protection that meets the specifications of ANSI Z87.