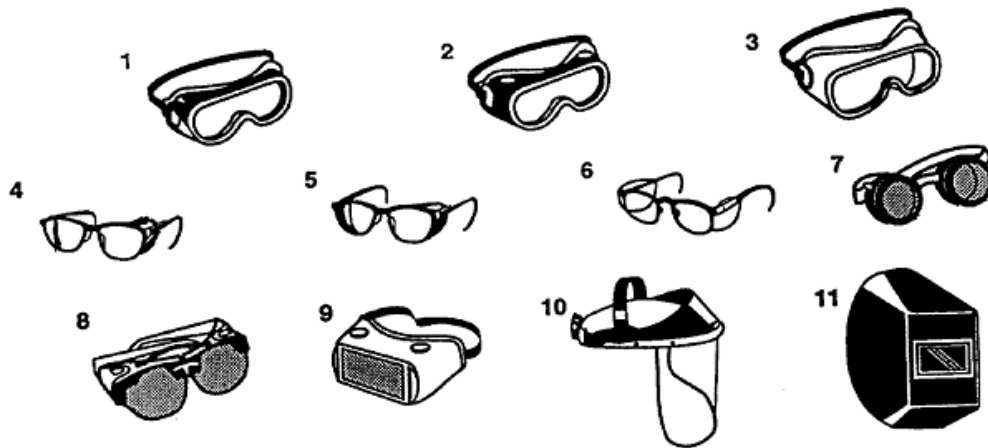


Eyes			
Suggested Questions	Typical Operations of Concerns	Yes	No
Do your employees perform tasks, or work near employees who perform tasks, that might produce airborne dust or flying particles?	Sawing, cutting, drilling, sanding, grinding, hammering, chopping, abrasive blasting, punch press operations, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do your employees handle, or work near employees who handle, hazardous liquid chemicals or encounter blood splashes?	Pouring, mixing, painting, cleaning, syphoning, dip tank operations, dental and health care services, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' eyes exposed to other potential physical or chemical irritants?	Battery charging, installing fiberglass insulation, compressed air or gas operations, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees exposed to intense light or lasers?	Welding, cutting, laser operations, etc.☒	<input type="checkbox"/>	<input type="checkbox"/>
Face			
Do your employees handle, or work near employees who handle, hazardous liquid chemicals?	Pouring, mixing, painting, cleaning, syphoning, dip tank operations, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' faces exposed to extreme heat?	Welding, pouring molten metal, smithing, baking, cooking, drying, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' faces exposed to other potential irritants?	Cutting, sanding, grinding, hammering, chopping, pouring, mixing, painting, cleaning, syphoning, etc.	<input type="checkbox"/>	<input type="checkbox"/>

Figure 1. Recommended Eye and Face Protectors



- 1. GOGGLES, Flexible Fitting, Regular Ventilation
- 2. GOGGLES, Flexible Fitting, Hooded Ventilation
- 3. GOGGLES, Cushioned Fitting, Rigid Body
- 4. SPECTACLES, Metal Frame, With Side shields\*
- 5. SPECTACLES, Plastic Frame, With Side shields\*
- 6. SPECTACLES, Metal-Plastic Frame, With Flat-Fold Side shields\*
- 7. WELDING GOGGLES, Eyecup type, Tinted Lenses\*\*
- 7A. CHIPPING GOGGLES, Eyecup Type, Clear Safety Lenses (not illustrated)
- 8. WELDING GOGGLES, Eyecup type, Tinted Plate Lens\*\*
- 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, Tinted/Transparent)
- 11. WELDING HELMETS\*\*

\*These are also available without side shields for limited use requiring only frontal protection.



Operation	Hazards	Recommended Protectors (see Figure 1)
Acetylene-burning, Acetylene-cutting, Acetylenewelding	Sparks, harmful rays, molten metal, flying particles	7,8,9
Chemical handling	Splash, acid burns, fumes	2,10 (for severe exposure add 10 over 2)
Chipping	Flying particles	1,3,4,5,6,7A,8A
Electric (arc) welding	Sparks, intense rays, molten metal	9,11 (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	1,3,4,5,6,10
Grinding - heavy	Flying particles	1,3,7A,8A (for sever exposure add 10)
Laboratory	Chemical splash, glass	2 (10 when in breakage combination with 4,5,6)
Machining	Flying particles	1,3,4,5,6,10
Molten metals	Heat, glare, sparks, splash	7,8 (10 in combination with 4,5,6 in tinted lenses)
Spot welding	Flying particles, sparks	1,3,4,5,6,10

**Head**

Suggested Questions	Typical Operations of Concerns	Yes	No
Might tools or other objects fall from above and strike your employees on the head?	Work stations or traffic routes located under catwalks or conveyor belts, construction, trenching, utility work, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' heads (when they stand or bend) near exposed beams, machine parts, pipes, etc.?	Construction, confined space operations, building maintenance, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do your employees work with or near exposed electrical wiring or components?	Building maintenance; utility work; construction; wiring; work on or near communications, computer, or other high tech equipment; arc or resistance welding; etc.	<input type="checkbox"/>	<input type="checkbox"/>

**Classes of Hard Hats**

**Class A:** Used for general service (e.g., mining, building construction, shipbuilding, lumbering, manufacturing). Provides good impact protection but limited voltage protection

**Class B:** Used for electrical work. Protects against falling objects and high-voltage shock and burns

**Class C:** Designed for comfort, offers limited protection. Protect heads that might bump against fixed objects, but does not protect against falling objects or electrical shock.

**Feet**

Suggested Questions	Typical Operations of Concerns	Yes	No
Might tools, heavy equipment, or other objects roll, fall onto, or strike your employees' feet?	Construction, plumbing, smithing, building maintenance, trenching, utility work, grass cutting, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do your employees work with or near exposed electrical wiring or components?	Building maintenance; utility work; construction; wiring; work on or near communications, computer, or other high tech equipment; arc or resistance welding; etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do your employees handle, or work near employees who handle, molten metal?	Welding, foundry work, casting, smithing, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do your employees work with explosives or in explosive atmospheres?	Demolition, explosives manufacturing, grain milling, spray painting, abrasive blasting, work with highly flammable materials, etc.	<input type="checkbox"/>	<input type="checkbox"/>



<b>Foot and Leg Protection Choices</b>
<b>Leggings:</b> Protect lower legs and feet from heat hazards, like molten metal or welding sparks. Safety snaps allow leggings to be removed quickly.
<b>Metatarsal Guards:</b> Strapped to outside of shoes to protect instep area from impact and compression. Made of aluminum, steel, fiber or plastic.
<b>Toe Guards:</b> Fit over the toes of regular shoes to protect only the toes from impact and compression. Made of steel, aluminum, or plastic.
<b>Combination Foot and Shin Guards:</b> May be used in combination with toe guards when greater protection is needed.
<b>Safety Shoes:</b> These have impact-resistant toes and heat-resistant soles that protect against hot work surfaces common in roofing, paving, and hot metal industries. May have metal insoles to protect against puncture wounds May be designed to be electrically conductive for use in explosive atmospheres May be designed to be electrically nonconductive to protect from workplace electrical hazards

<b>Hands</b>			
<b>Suggested Questions</b>	<b>Typical Operations of Concerns</b>	<b>Yes</b>	<b>No</b>
Do your employees' hands come into contact with tools or materials that might scrape, bruise, or cut?	Grinding, sanding, sawing, hammering, material handling, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do your employees handle chemicals that might irritate skin, or come into contact with blood?	Pouring, mixing, painting, cleaning, syphoning, dip tank operations, health care and dental services, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Do work procedures require your employees to place their hands and arms near extreme heat?	Welding, pouring molten metal, smithing, baking, cooking, drying, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' hands and arms placed near exposed electrical wiring or components?	Building maintenance; utility work; construction; wiring; work on or near communications, computer, or other high tech equipment; arc or resistance welding; etc.	<input type="checkbox"/>	<input type="checkbox"/>

<b>Metal Mesh, Leather, or Canvas Gloves</b>
<b>Leather Gloves:</b> Protect against sparks, moderate heat, blows, chips, and rough objects. Welders in particular need the durability of higher-quality leather gloves.
<b>Aluminized Gloves:</b> Provide reflective and insulating protection against heat. Usually used for welding, furnace, and foundry work. Require an insert made of synthetic materials that protect against heat and cold. <i>Asbestos inserts are prohibited.</i>
<b>Aramid Fiber Gloves:</b> Aramid is a synthetic material that protects against heat and cold. Many glove manufacturers use aramid fiber to make gloves that are cut- and abrasive-resistant and wear well.
<b>Other Synthetic Materials:</b> Several manufacturers make gloves with other synthetic fabrics that offer protection against heat and cold. Cut- and abrasive-resistant, and may withstand some diluted acids. Does not stand up well against alkalis and solvents.

<b>Fabric and Coated Fabric Gloves</b>
Gloves made of cotton or other fabric protect against dirt, slivers, chafing, and abrasion but do not provide sufficient protection to be used with rough, sharp or heavy materials.
Cotton flannel gloves coated with plastic, transforms fabric gloves into general-purpose hand protection offering slip-resistant qualities.
Coated fabric gloves are used for tasks ranging from handling bricks and wire rope to handling chemical containers in laboratory operations.
For protection against chemical exposure hazards, always check with the manufacturer to determine the gloves' effectiveness against the specific chemicals and conditions in the workplace.

<b>Chemical and Liquid-Resistant Gloves</b>
Gloves made of rubber (latex, nitrile, or butyl), plastic, or synthetic rubber-like material, such as neoprene, protect workers from burns, irritation, and dermatitis caused by contact with oils, greases, solvents, and other chemicals.
Use of rubber gloves also reduces the risk of exposure to blood and other potentially infectious substances.



**Common Gloves Used for Chemical Protection**

**Butyl Rubber Gloves:** Protect against nitric acid, sulfuric acid, hydrofluoric acid, red fuming nitric acid, rocket fuels, and peroxide. Resist oxidation and ozone corrosion. Resist abrasion and remain flexible at low temperatures.

**Natural Latex or Rubber Gloves:** Comfortable wear and pliability along with their protective qualities make them a popular general purpose glove. Resist abrasions caused by sandblasting, grinding, and polishing and protect workers' hands from most water solutions of acids, alkalis, salts, and ketones. Hypoallergenic gloves, glove liners, and powderless gloves are possible alternatives for those allergic to latex.

**Neoprene Gloves:** Good pliability, finger dexterity, high density, and tear resistance. Provides protection from hydraulic fluids, gasoline, alcohols, organic acids, and alkalis.

**Nitrile Rubber Gloves:** Provide protection from chlorinated solvents such as trichloroethylene and perchloroethylene. Intended for jobs requiring dexterity and sensitivity, yet stand up to heavy use even after prolonged exposure that cause other gloves to deteriorate. Resist abrasion, puncturing, snagging, and tearing.

**Body**

Suggested Questions	Typical Operations of Concerns	Yes	No
Are your employees' bodies exposed to irritating dust or chemical splashes?	Pouring, mixing, painting, cleaning, syphoning, dip tank operations, machining, sawing, battery charging, installing fiberglass insulation, compressed air or gas operations, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' bodies exposed to sharp or rough surfaces?	Cutting, grinding, sanding, sawing, glazing, material handling, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' bodies exposed to extreme heat?	Welding, pouring molten metal, smithing, baking, cooking, drying, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Are your employees' bodies exposed to acids or other hazardous substances?	Pouring, mixing, painting, cleaning, syphoning, dip tank operations, etc.	<input type="checkbox"/>	<input type="checkbox"/>

**Materials for Protective Clothing**

**Paper-Like Fiber:** Disposable suits made of this material provide protection against dust and splashes.

**Treated Wool and Cotton:** Adapts well to changing workplace temperatures. Comfortable and fire resistant. Protects against dust, abrasions, and rough and irritating surfaces.

**Duck:** Protects employees against cuts and bruises while they handle heavy, sharp, or rough materials.

**Leather:** Often used against dry heat and flame.

**Rubber, Rubberized Fabrics, Neoprene, and Plastics:** Provides protection against certain acids and other chemicals.

**Hearing**

Suggested Questions	Typical Operations of Concerns	Yes	No
Are your employees exposed to loud noise from machines, tools, music systems, etc.?	Machining, grinding, sanding, work near conveyors, pneumatic equipment, generators, ventilation fans, motors, punch and brake presses, etc.	<input type="checkbox"/>	<input type="checkbox"/>