PERSONAL PROTECTIVE EQUIPMENT PROGRAM

Personal protective equipment (PPE) is to be used in conjunction with engineering, work practice, and/or administrative controls to provide for employee safety and health in the workplace -- PPE is never to be used *instead* of the above-mentioned controls.

A personal protective equipment program must contain the following elements:

Hazard Assessment and Equipment Selection: The workplace must be assessed, and reassessed when necessary, to determine if hazards are present which necessitate the use of personal protective equipment. If hazards are likely to be present, the employer must:

- Select, and have each employee ***use*** PPE that will protect them from identified hazards.
- Communicate selection decisions to each affected employee.
- Select PPE that properly fits each affected employee.

A written certification must be provided verifying that the hazard assessment has been performed. It should contain the following:

- Workplace evaluated
- Person certifying evaluation has been performed
- Date of hazard assessment
- Document identification as certification of hazard assessment

Defective and damaged equipment shall not be used.

Training: The employer must provide training to each employee required to use PPE. The employee must know at least:

- When PPE is necessary
- What PPE is necessary
- How to properly don, doff, adjust and wear PPE
- Limitations of PPE
- Proper care, maintenance, useful life and disposal of PPE

All training should be conducted by a knowledgeable designated person. It should be presented in a manner that the employee can understand.

Each affected employee shall demonstrate an understanding of the training specified and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

Employers who allow their employees to wear eye and face protection on a voluntary basis when not required by OSHA or the employer must implement limited provisions of a PPE

program. For all other voluntary users, an additional written eye and face protection program that covers proper maintenance procedures must be implemented.

Retraining: When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required, the employer must retrain that employee.

Certification: The employer must verify that each affected employee has received and understands the required training through a written certification. The certification simply needs to contain the following:

- Name of each employee trained
- Dates of training
- Subject of certification - PPE suffices. Individual categories, types or models of PPE do not need to be included.

Criteria for PPE: Eye and face protection must comply with the American National Standards Institute, ANSI Z87.1-1989 standard if purchased after July 5, 1994 or ANSI Z87.1-1968 if purchased before July 5, 1994. The following minimum requirements must be met by all protective devices. Protectors shall:

- Provide adequate protection against the particular hazards for which they are designed
- Be of safe design and construction for the work to be performed
- Be reasonably comfortable when worn under the designated conditions
- Fit snugly and not unduly interfere with the movements of the wearer
- Be durable
- Be capable of being disinfected
- Be easily cleanable
- Be distinctly marked to facilitate identification only of the manufacturer

Contacts and prescription (Rx) lenses: Employers must ensure that employees who wear prescription (Rx) lenses or contacts use PPE that incorporates the prescription or use eye protection that can be worn over prescription lenses. OSHA recommends that workers have an extra pair of contacts or eyeglasses in case of contact failure or loss.

OSHA Website Resources: OSHA has created an eTool[1] for eye and face protection which can be located at www.osha.gov/SLTC/eyeandface_etool/index.html. In addition, an informative booklet, "Assessing the Need for Personal Protective Equipment: A Guide for Small Business Employers" can be located at www.osha.gov/Publications/osha3151.pdf.

1 eTools are "stand-alone", interactive, Web-based training tools specializing in occupational safety and health topics. They utilize graphical menus as well as expert system modules. These modules enable the user to answer questions, and receive reliable advice on how OSHA regulations apply to their work site.

Composites One's Accessories & Equipment Catalog offers an array of personal protective equipment for composite fabricators. Call your local Composites One office or 800/348-7503.

PPE SELECTION GUIDELINES

General procedures for selecting protective equipment:

- Become familiar with potential hazards and type of protective equipment available and what it can do (splash protection, impact protection, etc.)
- Compare hazards associated with environment (impact velocities, masses, projectile shape, radiation) with capabilities of available protective equipment
- Fit user with protective device and give instructions on care and use of PPE. It is important that all PPE be kept clean and properly maintained.

Eye and Face Protection Selection Chart[1]

Source	Assessment of Hazard	Protection
IMPACT- Chipping, grinding, machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, sanding	Flying fragments, objects, large chips, particles sand, dirt, etc.	Spectacles with side protection, goggles, face shields. See notes 1, 3, 4, 5, 8. For severe exposure, use faceshield.
HEAT - Furnace operations, pouring, casting, hot dipping and welding	Hot sparks	Faceshields, goggles, spectacles with side protection. For severe exposure, use faceshield. See notes 1,2, 3.
	Splash from molten metals	Faceshields worn over goggles. See notes 1,2,3.
	High temperature exposure	Screen faceshields, reflective face shields. See notes 1,2,3.
CHEMICALS - Acid and chemicals handling	Splash	Goggles, eyecup and cover types. For severe exposure, use faceshield. See notes 3,9.
	Irritating mists	Special-purpose goggles
DUST - Woodworking, buffing, general dusty conditions	Nuisance dust	Goggles, eyecup and cover types. See note 6.
LIGHT and/or RADIATION - Welding: Electric arc	Optical radiation	Welding helmets or welding shield. Typical shades: 10-14. See notes 7, 10.
Welding: Gas	Optical radiation	Welding goggles or welding face shield. Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4. See note 7.
Cutting, torch brazing, torch soldering	Optical radiation	Spectacles or welding face-shield. Typical shades, 1.5-3. See notes 3,7.
Glare	Poor vision	Spectacles with shaded or special-purpose lenses, as suitable. See notes 7,8.

1 Chart from **Federal Register**, Vol. 59, No. 66, April 6, 1994, p. 16363

Notes:
1 Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.
2 Operations involving heat may also involve light radiation. As required by OSHA standard, protection from both hazards must be provided.
3 Faceshields should only be worn over primary eye protection (spectacles or goggles)
4 Persons whose vision requires the use of prescription lenses must wear either protective devices fitted with prescription lenses or protective devices designed to be worn over regular prescription eyewear
5 Wearers of contact lenses must also wear appropriate eye and face protection devices in hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.
6 Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.
7 Welding helmets or faceshields should be used only over primary eye protection (spectacles or goggles).
8 Non-sideshield spectacles are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for "impact".
9 Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.
10 Protection from light radiation is directly related to filter lens density. Select the darkest shade that allows task to be performed.

Selection Guidelines for Head Protection: Where falling object hazards are present, helmets must be worn. Examples: working below other workers who are using tools and materials which could fall; working under conveyor belts which are carrying material; working below processes which might cause things to fall; working on exposed energized conductors. Protective helmets must comply with ANSI Z89.1-1986.

Selection Guidelines for Foot Protection: Safety shoes or boots are required for handling material like packages, objects, parts or heavy tools which could be dropped; where work activities involve manual material handling carts, handling bulk rolls, etc. which could potentially roll over employees' feet; where sharp objects such as nails, wire, tacks, screws, large staples, etc. could be stepped on. Protective footwear must comply with ANSI Z41-1991.

Selection Guidelines for Hand Protection: Gloves should be worn to prevent cuts, abrasions, burns and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure. Performance characteristics of gloves relative to the specific hazards must be assessed. Other factors to be considered:

- As long as performance characteristics are acceptable, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types.
- Work activities should be taken into account to determine such things as degree of dexterity, duration, frequency and degree of exposure of the hazard

To protect against chemical hazards, the following is suggested:

- Toxic properties of chemicals are to be determined: ability of chemical to cause local effects on skin and/or to pass through the skin
- For mixtures, gloves should be selected on the basis of the chemical component with the shortest breakthrough time
- Employees must be able to remove gloves without causing skin contamination