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# **Section I**

## **Introduction**

## Introduction

The use of Personal Protective Equipment (PPE) to eliminate injuries is an important component of Hilscher-Clarke's safety program. This program and policy has been established to aid the company in two basic objectives regarding the use of Personal Protective Equipment:

- ❑ *To protect the wearer from safety and health hazards; and*
- ❑ *To prevent injury to the wearer from incorrect use and/or malfunction of the PPE.*

In order to ensure the safety of all individuals on a worksite, Hilscher-Clarke, expressly forbids any employee, subcontractor, or vendor from furnishing and using their own Personal Protective Equipment until it has been examined and approved by the President, Safety Manager, Supervisory Personnel or otherwise designated Competent Person. All equipment furnished by outside employees, subcontractors or vendors must meet the full scope and applicability of this policy and procedure.

This safety policy and procedure is established in accordance with Occupational Safety and Health Standards for General Industry Standard 29 CFR 1910.132 – .137 and Occupational Safety and Health Standards for Construction Industry 29 CFR 1926.95 – .107. This policy and procedures shall apply to any and all employees, subcontractors and/or vendors at any and Hilscher-Clarke work-site locations.

Hilscher-Clarke requires conformance with the safety standards set herein. A site-specific program may be utilized, providing it meets or exceeds the requirements set forth in this manual.

## Policy Statement

It is the policy of Hilscher-Clarke to provide a place of employment that is free from recognized hazards that cause or are likely to cause death or serious physical harm to employees or the public. Therefore, Hilscher-Clarke has established this policy and procedures to be applied when there is

*“...reasonable probability that injury or illness can be prevented by the use of Personal Protective Equipment.”*

Personal Protective Equipment should be considered a means of controlling hazards only after the following have been implemented:

- ❑ Engineering controls (i.e. increased ventilation);
- ❑ Administrative controls; and
- ❑ Safe work practices;

This safety policy and procedure establishes the methods and accountability for Hilscher-Clarke's Personal Protective Equipment (PPE) Program. It provides:

- ❑ Guidelines for selecting PPE based on hazard;
- ❑ Provisions for training and discussion on the need for hazard assessment;
- ❑ PPE requirements for the head, eye and face, ear, hand, foot and leg, body and respiratory system;
- ❑ Proper use and maintenance of PPE;
- ❑ Areas of responsibility for the President, Safety Manager, Supervisory Personnel, and Human Resources Representative.

This policy and procedure affects any employee who is exposed to hazards that require Personal Protective Equipment.

# **Section II**

## **General Provisions**

## 1.0 Training & Recordkeeping Requirements

- 1.1** The formal written Personal Protective Equipment training program is to provide employees with the necessary understanding, skills, and knowledge to safely perform their jobs. The component of the affected employee training program includes, but is not limited to, instruction on:
  - Hazard Awareness;
  - When PPE is necessary;
  - How to don, remove, adjust, and wear PPE;
  - Limitations of PPE;
  - Proper care, maintenance, useful life and disposal of PPE.
- 1.2** Refresher training is to be provided to employees annually. Refresher training will also be provided/conducted whenever:
  - An Employees duties change, requiring additional PPE;
  - Whenever hazards in the work place change; or
  - An employee demonstrates lack of use, improper use or insufficient skill and understanding of the PPE he/she has been issued.
  - The type/brand of PPE is changed from the equipment they were originally trained on.
- 1.3** All employees must be trained before the specific Personal Protective Equipments are put into use.
- 1.4** Appendix A presents a training certification form to document the affected employee's training on Personal Protective Equipment.
- 1.5** Recordkeeping requirements shall include, but not be limited to:
  - 1.5.1** Certification of training with name, identity of trainers and training dates.
    - Work practices
- 1.6** Qualified Persons/Competent Person, for the purpose of this plan, shall be trained in:
  - Hazard Assessment;
  - Hazard Analysis;
  - Appropriate PPE Selection for the Hazards.

## 2.0 Responsibilities

The Occupational Safety & Health Act assigns specific responsibilities to the Employer, Supervisors and Workers concerning the use of Personal Protective Equipment.

It is the responsibility of the President, Safety Manager, Supervisors and all Employees to ensure the implementation of Hilscher-Clarke's safety policy and procedure on PPE. It is also the responsibility of each Hilscher-Clarke employee to report immediately any unsafe act or condition to his or her immediate Supervisor. Specific responsibilities are outlined below.

It is the responsibility of Hilscher-Clarke to provide and maintain equipment that is adequate and is safe in design and construction, at no cost to the affected individual.

### 2.1 *President* shall be responsible for the following:

- 2.1.1 Review and update of Hilscher-Clarke's Personal Protective Equipment Program to conform to current CFR and ANSI standards.
- 2.1.2 Insure compliance with standards set forth in this program and policies by periodic inspection of worksites.
- 2.1.3 Assisting Safety Manager and/or Supervisory Personnel with:
  - Providing training as set forth in the program and policies;
  - Providing consultative and audit assistance to ensure effective implementation of this safety policy and procedure;
- 2.1.4 The President may delegate the responsibility of various aspects of the Personal Protective Equipment Program to a Qualified Organization. However, the President's ultimate responsibility for his/her aspects of the program cannot be delegated.

### 2.2 *Safety Manager* shall be responsible for the following:

- 2.2.1 Identifying the employees affected by this safety policy and procedure.
- 2.2.2 Working with purchasing to ensure that all newly purchased PPE complies with current safety regulations.
- 2.2.3 Conduct Hazard Assessments (*Appendix B*) and train other designated employees to perform Hazard Assessments.
- 2.2.4 The equipment, materials, and protective devices provided are maintained in good condition.
- 2.2.5 The equipment, materials, and protective devices provided are used only as prescribed.
- 2.2.6 With the approval of the President, the Safety Manager may delegate the responsibility of various aspects of the Personal Protective Equipment Program to a Qualified Organization (as approved by the President). However, the Safety Manager's ultimate responsibility for his/her aspects of the program cannot be delegated.

### 2.3 *Supervisory Personnel* shall be responsible for the following:

- 2.3.1 Communicating appropriate needs to Safety Manager(s).
- 2.3.2 Ensures that employees are properly trained before using PPE and that the issued PPE is being worn properly.

## 2.0 Responsibilities (cont.)

### *Supervisory Personnel (cont.)*

**2.3.3** Ensuring that no employee is allowed to work in any hazardous environment without the proper protective equipment consistent with the hazard.

**2.3.4** With the approval of the Safety Manager, the Supervisor may delegate the responsibility of various aspects of the Personal Protective Equipment Program to another Qualified Person, Competent Person, or Qualified Organization (as approved by the Safety Manager). However, the Supervisor's ultimate responsibility for his/her aspects of the program cannot be delegated.

**2.4** *Employees* shall be responsible for the following:

**2.4.1** Complying with all applicable guidelines contained in this safety policy and procedure.

**2.4.2** Report any unsafe act associated with this safety policy and procedure to their immediate Supervisor.

**2.4.3** Identify and report any hazards that may require PPE.

**2.4.4** Employees who are assigned PPE are to keep the PPE available and in good working order at all times and to have the PPE replaced when the PPE becomes worn or unsafe.

## 3.0 Hazard Assessment

Each worksite/existing structure will be assessed (by a Qualified/Competent Person as identified by this plan) to determine if hazards are present which necessitate the use of PPE. Hilscher-Clarke will verify that the assessment has been completed through a written certification (***Job Hazard Assessment Form Appendix B***). If it is determined that such hazards are present, where applicable, Hilscher-Clarke will select personal protective equipment for all Affected Employees and communicate the selection decisions to all Affected Employees, regardless of status.

- 3.1 At a minimum, the Job Hazard Assessment shall consist of:
  - 3.1.1 A “walk-through” survey to identify hazard sources based on general hazard categories.
  - 3.1.2 Observation of the sources.
  - 3.1.3 Organizing data from the survey.
  - 3.1.4 Analyzing data from the survey.
- 3.2 The basic hazard categories that should be considered in the walk-through survey are:
  - 3.2.1 Impact
  - 3.2.2 Penetration
  - 3.2.3 Compression (roll-over)
  - 3.2.4 Chemical
  - 3.2.5 Heat
  - 3.2.6 Harmful Dust
  - 3.2.7 Light (optical radiation)
- 3.3 The Job Hazard Assessment form provides the user with a formal and accurate assessment of worksite hazards. The form focuses on head, eye and face, hand and arm, and foot and leg hazards. Forms of hazard assessments that are already in place at Hilscher-Clarke are:
  - Hearing Conservation Program (Noise Hazards)
  - Respiratory Protection Program
  - Hazard Communication Program (HAZCOM)
- 3.4 Keys to Job Hazard Assessment are recognizing, evaluating, and controlling hazards. During the assessment a determination will be made if the hazard can be eliminated.
  - 3.4.1 Whenever possible, engineering and administrative controls will be used first to eliminate or reduce employees’ exposure to any workplace hazard.
- 3.5 If hazards are present, then a ***Hazard Analysis*** shall be done so Hilscher-Clarke can:
  - 3.5.1 Eliminate the hazard. This is the most effective measure. These techniques, when possible, will be used to eliminate the hazard(s):
    - Choose a different process;
    - Modify an existing process;
    - Substitute with a less hazardous substance;
    - Improve environment (i.e., ventilation);
    - Modify or change equipment or tools.
  - 3.5.2 Contain the hazard. If the hazard cannot be eliminated, contact might be prevented by the use of enclosures, machine guards, worker booths or similar devices.
- 3.6 If the hazard(s) cannot be eliminated, or contained, Hilscher-Clarke will select the type(s) of PPE that will best protect the affected employee(s) from the identified hazard(s).
  - 3.5.3 Hilscher-Clarke will communicate selection decisions to each Affected Employee.
  - 3.5.4 Select PPE that properly fits each Affected Employee (see Section 4.0 of this Policy and Procedure).

## 4.0 PPE Selection Guidelines

- 4.1 After completion of the hazard assessment, the general procedure for selection of personal protective equipment is to:
- 4.1.1 Become familiar with the potential hazards and the type of protective equipment that is available, and what it can do;
  - 4.1.2 Compare the hazards associated with the environment;
  - 4.1.3 Select the protective equipment which ensures a level of protection greater than the minimum required to protect employees from the hazards; and
  - 4.1.4 Fit the user with the protective device and give instructions on care and use of the PPE.
- 4.2 Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the device is more likely if it fits the wearer comfortably and protective devices are generally available in a variety of sizes.
- 4.3 Adjustments should be made on an individual basis for a comfortable fit that will maintain the protective device in the proper position.
- 4.4 Particular care should be taken in fitting devices for eye protection against dust and chemical splashes.
- 4.5 Proper fitting of helmets (hardhats) is important to ensure that it will not fall off during work operations.
- 4.6 Table 1 is a checklist for PPE selection in various hazardous situations. The checklist is intended for use as a quick reference and should be used in conjunction with the applicable sections of this policy and procedure. There may be operating conditions in which the use of a listed item from the table is impractical or would increase the hazard. In these instances, use appropriate PPE and procedures to safeguard employee safety and health.

**TABLE 1**

Hazard	Recommended PPE
<b>Heavy Impact or Falling Object</b>	<b>Head:</b> Hard Hat
	<b>Knees, Legs, &amp; Ankles:</b> Fiber Metal Leggings
	<b>Feet &amp; Toes:</b> Steel Box Toe Shoes or Toe Guards
<b>Moderate Impact</b>	<b>Head:</b> Hard Hat
	<b>Feet &amp; Toes:</b> Steel Box Toe Shoes
<b>Small Flying Particles</b>	<b>Head:</b> Abrasive Blasting Hood
	<b>Eyes:</b> Goggles, Spectacles w/Side Shields
	<b>Face:</b> Plastic Face Shields
	<b>Fingers, Hands &amp; Arms:</b> Leather Gloves or Mittens, Sleeves
	<b>Trunk:</b> Leather/Canvas Fiber Aprons, Coats, or Jackets
	<b>Knees, Legs, &amp; Ankles:</b> Leather, Fiber Metal, or Flame-Resistant Duck Pants, Knee Guards, Leggings, or Spats
<b>Dusts</b>	<b>Eyes:</b> Goggles, Spectacles w/Side Shields, Plastic Eye Shields
	<b>Face:</b> Plastic Face Shields
	<b>Respiratory:</b> Approved Dust, Airline, or Abrasive Blasting Respirator

## 4.0 PPE Selection Guidelines (cont.)

TABLE 1 (cont.)

Hazard	Recommended PPE
<b>Sparks and Metal Spatter</b>	<b>Head:</b> Cotton or Wool Cap (Flame Retardant Treated)
	<b>Eyes:</b> Goggles, Spectacles w/Side Shields, Plastic Eye Shields
	<b>Face:</b> Plastic Face Shields
	<b>Fingers, Hands, &amp; Arms:</b> Leather Flame Resistant Duck or Aluminum Fabric Gloves or Mittens, Sleeves
	<b>Trunk:</b> Leather Aprons, Coats, or Jackets
	<b>Knees, Legs, &amp; Ankles:</b> Leather Fiber Metal, Flame-Resistant Duck Pants, Knee Guards, Shin Guards, Leggings, or Spats
<b>Splashing Metal</b>	<b>Eyes:</b> Goggles, Spectacles w/Side Shields, Plastic Eye Shields
	<b>Face:</b> Wire Screen Shield
	<b>Fingers, Hands, &amp; Arms:</b> Leather Flame Resistant Duck or Aluminum Fabric Gloves or Mittens, Sleeves
	<b>Trunk:</b> Leather Aprons, Coats, or Jackets
	<b>Knees, Legs, &amp; Ankles:</b> Leather Fiber Metal, Flame-Resistant Duck Pants, Knee Guards, Shin Guards, Leggings, or Spats
	<b>Feet &amp; Toes:</b> Leather Shoes, Foundry Shoes
<b>Splashing Liquids &amp; Chemicals</b>	<b>Head:</b> Plastic-Rubber Hat
	<b>Eyes:</b> Goggles, Hoods
	<b>Face:</b> Plastic Face Shields, Hoods
	<b>Respiratory:</b> Chemical-Resistant Suit w/Air Supply
	<b>Fingers, Hands, &amp; Arms:</b> Rubber, Natural Rubber, Plastics, Synthetic Fabrics, Coated Glass Fiber, or Other Chemical-Resistant Gloves or Mittens, Sleeves
	<b>Trunk:</b> Rubber, Plastic, or other Chemical-Resistant Material
	<b>Knees, Legs, &amp; Ankles:</b> Rubber, Plastic, or Other Chemical Resistant Material
	<b>Feet &amp; Toes:</b> Leather Shoes, Foundry Shoes
<b>Mists, Vapors, Gases, Fumes, and Smoke</b>	<b>Eyes:</b> Goggles
	<b>Face:</b> Plastic Face Shields for Mists
	<b>Respiratory/Immediately Dangerous to Life:</b> Self-Contained Apparatus
	<b>Respiratory/Not Immediately Dangerous to Life:</b> Air Line Respirator, Hose Mask Without Blower, Chemical Cartridge Respirator w/Filter for Specific Contaminant
	<b>Fingers, Hands, &amp; Arms:</b> Rubber, Natural Rubber, Plastic Synthetic Fiber, Coated Glass Fiber, or Other Chemical-Resistant Gloves or Mittens, Sleeves, Protective Creams
	<b>Trunk:</b> Rubber, Plastic, or other Chemical-Resistant Material
	<b>Knees, Legs, and Ankles:</b> Rubber, Plastic, or Other Chemical Resistant Material
	<b>Feet &amp; Toes:</b> Conductive Shoes (for explosive gases, vapors or other materials).

## 4.0 PPE Selection Guidelines (cont.)

TABLE 1 (cont.)

Hazard	Recommended PPE
<b>Hot Materials</b>	<b>Fingers, Hands, &amp; Arms:</b> Leather Gloves, Mittens, Hand Pads, or Finger cots; Leather, or Flame Resistant Duck Sleeves
	<b>Trunk:</b> Leather Aprons, Coats, or Jackets
	<b>Knees, Legs, &amp; Ankles:</b> Leather, or Flame Resistant Duck Pants, Knee Guards, Shin Guards, Leggings, or Spats
	<b>Feet &amp; Toes:</b> Wood Soles
<b>Heat</b>	<b>Head:</b> Cotton or Wool Cap
	<b>Fingers, Hands, &amp; Arms:</b> Leather Aluminized Fabrics, Glass Fiber Insulated Gloves, Mittens, or Hand Pads; Flame-Resistant Duck or Reflective Fabric (for radiant heat) Sleeves
	<b>Knees, Legs, &amp; Ankles:</b> Flame-Resistant Duck, Aluminized Fabrics for Radiant Heat
	<b>Feet &amp; Toes:</b> Leather or Wood Soles, Thermal Insulated Shoes
	<b>Whole Body:</b> Aluminized Garments for Radiant Heat, Vortex Tube w/Air Cooled Suits
<b>Moisture &amp; Water</b>	<b>Head:</b> Plastic: Rubber Hat
	<b>Fingers, Hands, &amp; Arms:</b> Rubber, Oiled Fabrics, Plastic, Coated Glass Fiber Gloves, Mittens or Finger Cots, Rubber Oiled Fabrics, or Plastic Sleeves
	<b>Trunk:</b> Rubber or Plastic Material
	<b>Knees, Legs, &amp; Ankles:</b> Rubber or Plastic Material
	<b>Feet &amp; Toes:</b> Nonskid Shoes, Leather or Wood Soles, Rubber or Neoprene Overshoes
	<b>Whole Body:</b> Garments of Rubber, Plastic, or Other Impervious Material
<b>Slips &amp; Falls</b>	<b>Feet &amp; Toes:</b> Nonskid shoes, Wood Soles, Slip-Resistant Soles & Heels (cord & cork)
<b>Cuts &amp; Abrasions</b>	<b>Head:</b> Hard Hat
	<b>Fingers, Hands, &amp; Arms:</b> Leather, Metal Mesh, or Cotton Canvas Gloves, Mittens, Hand Pads, or Finger Cots, Leather Sleeves
	<b>Trunk:</b> Leather or Canvas Fiber Aprons, Coats, or Jackets
	<b>Knees, Legs, &amp; Ankles:</b> Leather or Fiber Metal Pants, Knee Guards, Shin Guards, Leggings, or Spats
	<b>Feet &amp; Toes:</b> Steel Box Toe Shoes, Wood Soles
<b>Dermatitis</b>	<b>Head:</b> Plastic-Rubber Hat, Cotton or Wool Cap
	<b>Face:</b> Plastic Face Shield, Protective Barrier Creams
	<b>Fingers, Hands, &amp; Arms:</b> Rubber, Synthetic Rubber Plastic or Cotton Gloves, Protective Barrier Creams
	<b>Trunk:</b> Rubber or Plastic Material
	<b>Knees, Legs, &amp; Ankles:</b> Rubber or Plastic Material
	<b>Feet &amp; Toes:</b> Rubber Boots, Wood Soles, Shower Sandals (paper or wood).

## 4.0 PPE Selection Guidelines (cont.)

TABLE 1 (cont.)

Hazard	Recommended PPE
<b>Electricity &amp; Electric Shock</b>	<b>Head:</b> Plastic-Rubber or Plastic Hat (Class B)
	<b>Fingers, Hands &amp; Arms:</b> Rubber Gloves & Sleeves Resistant to 10,000 Volts for 3 Minutes
	<b>Trunk:</b> Rubber Material
	<b>Knees, Legs, &amp; Ankles:</b> Fiber Material or Flame-Resistant Duck Pants, Knee Guards, Shin Guards, Leggings, or Spats
	<b>Feet &amp; Toes:</b> Steel Box Shoes
<b>Explosives</b>	<b>Head:</b> Cap (flame retardant)
	<b>Fingers, Hands, &amp; Arms:</b> Gloves
	<b>Trunk:</b> Powder Uniform
	<b>Feet &amp; Toes:</b> Conductive Shoes
<b>Machinery</b>	<b>Head:</b> Cap (long hair), Cotton or Wool Caps
	<b>Fingers, Hands &amp; Arms:</b> Flame-Resistant Duck Sleeves
	<b>Trunk:</b> Rubber, Plastic, or Canvas Fiber Aprons, Coats, or Jackets
	<b>Knees, Legs, &amp; Ankles:</b> Fiber Material or Flame-Resistant Duck Pants, Knee Guards, Shin Guards, Leggings, or Spats
	<b>Feet &amp; Toes:</b> Steel Box Shoes
<b>Reflected Light &amp; Glare</b>	<b>Eyes:</b> Goggles, Spectacles w/Side Shields with Filter Lenses
<b>Welding</b>	<b>Head:</b> Leather Skull Cap
	<b>Eyes:</b> Goggles-Welders' Eyecup, Helmets, or Hand Shields with Filter Lenses
	<b>Face:</b> Helmets or Hand Shields w/Filter Lenses, Face Shield
	<b>Hands:</b> Flame Proof Gauntlet Gloves
<b>Laser Radiation</b>	<b>Eyes:</b> Protective Eyewear
<b>Noise</b>	<b>Ears:</b> Plug or Insert, Cup or Muff Ear Protectors, Helmet

## 5.0 Head Protection

- 5.1 Employees working in areas where there is possible danger of head injury from impact, from falling or flying objects, or when working with High-voltage equipment. The hard hat should be easily adjustable so employees will wear the hat properly (*Appendix D*).
- 5.2 Hilscher-Clarke employees are required to wear hard hats that:
  - 5.2.1 Resist a reasonable impact force without breaking or collapsing the shell or damaging the internal suspension.
  - 5.2.2 Dissipate and/or absorb as much impact force as possible to avoid transmitting the force to the head, spinal column, or other parts of the body.
  - 5.2.3 Resist impact penetration.
  - 5.2.4 Provide electrical protection as applicable.
- 5.3 Hard Hats approved for use by Hilscher-Clarke are either Class A or Class B, and are clearly marked with the American National Safety Institute label (ANSI Z89.1) next to the manufacturer's name.
  - 5.3.1 Class A hard hats provide protection against impact and falling or flying objects.
  - 5.3.2 Class B hard hats protect the head against high voltage electricity.
- 5.4 At Hilscher-Clarke, hard hats will be disposed of whenever the helmet has received impact or shows signs of deterioration.
- 5.5 It is mandatory that hard hats be worn in all construction areas, including roads, shops, and outlying work areas where there is a potential exposure to falling or flying material.
- 5.6 Class B hard hats shall be worn where employees are exposed to overhead electrical conductors that could come into contact with their heads.
- 5.7 Materials used in helmets will be water-resistant and slow-burning.
- 5.8 Each helmet consists essentially of a shell and suspension. Ventilation is provided by a space between the headband and the shell.
- 5.9 Each helmet will be accompanied by manufacturer's instructions explaining the proper method of adjusting and replacing the suspension and headband.
- 5.10 **Fitting:**
  - 5.10.1 Headbands are adjustable in 1/8" – size increments. When the headband is adjusted to the right size, it provides sufficient clearance between the shell and the headband. The removable-replaceable type sweatband will cover at least the forehead portion of the headband.
  - 5.10.2 The shell will be of one-piece seamless construction and designed to resist the impact of a blow from falling material. The internal cradle of the headband and sweatband forms the suspension. Any part that comes in contact with the wearer's head will not be irritating to "normal" skin.
- 5.11 **Inspection & Maintenance:**
  - 5.11.1 Manufacturers will be consulted with regard to paint or cleaning materials for their helmets since some paints and thinners may damage the shell and reduce protection by physically weakening it or negating electrical resistance.
  - 5.11.2 The accepted method of cleaning shells is dipping them in hot water (approximately 140°F) containing a good mild detergent for at least one minute. Shells should then be scrubbed and rinsed in clear hot water. After rinsing, the shell should be carefully inspected for any signs of damage.
  - 5.11.3 All components, shells, suspensions, headbands, sweatbands, and any accessories, will be visually inspected daily for signs of dents, cracks, penetration, or any other damage that might reduce the degree of safety originally provided.

## 5.0 Head Protection (cont.)

**5.11.4** Employees will be cautioned that if unusual conditions occur (such as higher or lower extreme temperatures, than normal), or if there are signs of abuse or mutilation to the helmet or any component, the margin of safety may be reduced.

**5.11.5** Helmets should not be stored or carried on the rear-window shelf of an automobile, since sunlight and extreme heat may adversely affect the degree of protection.

### **5.12 Winter Liners & Chin Straps:**

**5.12.1** All winter liners shall be fabricated of materials that will not support combustion.

**5.12.2** Winter liners and chin-straps used in conjunction with Class B helmets for protection from electricity shall not contain any metallic or other conductive material.

**5.13 Bump Caps** or hats shall never be used as a substitute for safety helmets (hard hats) where there is danger from falling objects, flying particles, or electrical shock.

**5.14 Hair Enclosures.** A hat, cap, or net shall be worn where there is danger of hair entanglement in moving parts of machinery or equipment, or where there is exposure to means of ignition.

**5.14.1** Hair enclosures shall be designed to enclose all loose hair and be adjustable to accommodate all head sizes.

**5.14.2** Material used for a hair enclosure shall be durable, fast-dyed, nonirritating to the skin and capable of withstanding frequent cleaning.

**5.14.3** Hair enclosures shall not be reissued from one employee to another unless it has been thoroughly sanitized.

**5.14.4** Hair enclosures used in areas where there is exposure to sparks, hot or molten metals, or ignition from heat, flames, or chemical reaction shall be made of materials that are nonburning or flame retardant and do not melt.

## 6.0 Eye & Face Protection

Eye injuries are caused by flying particles, cuts, chemicals, injurious light, heat rays, and blows to the face and eyes. To prevent such injuries, Hilscher-Clarke offers many types of eye and face protection devices.

- 6.1** Employees will be issued, and will, use appropriate eye or face protection when exposed to eye or face hazards. From flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. Protectors must meet the following minimum requirements.
- Provide adequate protection against particular hazards for which they are designed;
  - Be reasonably comfortable when worn under the designated conditions;
  - Fit snugly without interfering with the movements or vision of the wearer;
  - Be durable;
  - Be capable of being disinfected;
  - Be easily cleanable;
  - Be kept clean and in good repair.
- 6.2** The following sign, or one with the same wording, will be posted in all areas where eye protection is mandatory. Employees who work in these areas will wear the eye protection issued to them. Visitors to the area shall also be provided with suitable eye protection.



- 6.3 Selection** – Each eye, face, or face-and-eye protector is designed for a particular hazard. In using the protector, consideration will be given to the kind and degree of hazard, and the protector will be selected on that basis.
- 6.3.1** Employees whose vision requires the use of corrective lenses and who are required to wear protective eyewear shall wear one of the following types of goggles or eye glasses:
- Eye glasses whose protective lenses provide optical correction;
  - Goggles that can be worn over corrective eye glasses without disturbing the adjustment of the eye glasses; and
  - Goggles that incorporate corrective lenses mounted behind the protective lenses.
- 6.3.2** When limitations or precautions are indicated by the manufacturer, they will be transmitted to the user and strictly observed.
- 6.4 Table 2** is a guide for selecting the devices that will provide adequate eye protection for various operations. **Table 3** lists the lens shades recommended for protecting the eye against flare and welding. If eye protection is needed for situations not listed in either table, consult a Supervisor and/or the “Qualified” or “Competent Person”.

## 6.0 Eye & Face Protection (cont.)

**Table 2**

**Eye-protection equipment for various operations and material exposures.**

<b>Hazard</b>	<b>Recommended Eye-protection</b>
<b>Chemicals</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> <li>▪ Ventilated Clear-Plastic Goggles</li> </ul>
<b>Chipping</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> <li>▪ Ventilated Clear-Plastic Goggles</li> <li>▪ Safety Glasses with Plastic Side Shields</li> </ul>
<b>Compressed Air Use</b>	<ul style="list-style-type: none"> <li>▪ Ventilated Clear-Plastic Goggles</li> <li>▪ Personal Safety Glasses</li> <li>▪ Safety Glasses with Plastic Side Shields</li> </ul>
<b>Dust</b>	<ul style="list-style-type: none"> <li>▪ Ventilated Clear-Plastic Goggles</li> </ul>
<b>Electrical Work</b>	<ul style="list-style-type: none"> <li>▪ Safety Glasses with Plastic Frames and Side Shields</li> <li>▪ Face Shield</li> </ul>
<b>Forging</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> <li>▪ Safety Glasses</li> <li>▪ Safety Glasses with Plastic Side Shields</li> <li>▪ Ventilated Clear-Plastic Goggles</li> </ul>
<b>Furnace Operations</b>	<ul style="list-style-type: none"> <li>▪ Calobar Clip-ons</li> <li>▪ Welding Goggles: See Table 3 for recommended shades.</li> <li>▪ Welding Goggles Plate Holder: See Table 3 for recommended shades.</li> <li>▪ Welding Helmet: See Table 3 for recommended shades.</li> </ul>
<b>Grinding, Buffing, Polishing</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> <li>▪ Safety Glasses with Plastic Side Shields</li> <li>▪ Ventilated Clear-Plastic Goggles</li> </ul>
<b>Lasers</b>	<ul style="list-style-type: none"> <li>▪ Special Laser Glasses</li> </ul>
<b>Machine &amp; Hand-Tool Operations</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> <li>▪ Safety Glasses</li> <li>▪ Safety Glasses with Plastic Side Shields</li> <li>▪ Ventilated Clear-Plastic Goggles</li> </ul>
<b>Molten Material Handling</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> </ul>
<b>Welding, Cutting, Burning (Acetylene)</b>	<ul style="list-style-type: none"> <li>▪ Welding Goggles: See Table 3 for recommended shades.</li> <li>▪ Welding Goggles Plate Holder: See Table 3 for recommended shades.</li> <li>▪ Welding Helmet: See Table 3 for recommended shades.</li> </ul>
<b>Welding (Spot &amp; Butt)</b>	<ul style="list-style-type: none"> <li>▪ Face Shield</li> <li>▪ Safety Glasses</li> <li>▪ Safety Glasses with Plastic Side Shields</li> <li>▪ Ventilated Clear-Plastic Goggles</li> </ul>

Table 3

Recommended lens shades for welding operations

Operation	Lens Shade Number
<b>Oxyacetylene Torch Cutting &amp; Welding:</b> <ul style="list-style-type: none"> <li>▪ Soldering</li> <li>▪ Brazing</li> <li>▪ Cutting                             <ul style="list-style-type: none"> <li>- Light less than 1 in.</li> <li>- Medium, 1 to 6 in.</li> <li>- Heavy, greater than 6 in.</li> </ul> </li> </ul>	Medium Calobar 3or 4  3 or 4 4 or 5 5 or 6
<b>Welding</b> <ul style="list-style-type: none"> <li>▪ Light, less than 1/8 in.</li> <li>▪ Medium, 1/8 to 1/2 in.</li> <li>▪ Heavy, greater than 1/2 in.</li> </ul>	4 or 5 5 or 6 6 or 8
<b>Arc Welding – in gas-shielded arcs (helium or argon), use shades 11 through 14.</b> <ul style="list-style-type: none"> <li>▪ Metal or Helium Arc                             <ul style="list-style-type: none"> <li>- 1/6 to 3/32 in. – diameter rod</li> <li>- 3/32 to 1/8 in. – diameter rod</li> <li>- 1/8 to 5/32 in. – diameter rod</li> </ul> </li> </ul>	10 10 11
<b>Metal Arc</b> <ul style="list-style-type: none"> <li>▪ 3/16 to 7/32 in. – diameter rod</li> <li>▪ 1/4 in. – diameter rod</li> <li>▪ 5/16 to 3/8 in. – diameter rod</li> </ul>	12 13 14
<b>Atomic Arc</b>	14
<b>Carbon Arc</b>	14

**6.5 Approvals** – Design, construction, testing, and use of eye and face protection will be in accordance with ANSI Z87.1-1989. Lenses and frames shall be marked with the manufacturer’s symbol to indicate compliance with ANSI Z87.1-1989.

**6.5.1** The use of approved lenses in unapproved frames is not acceptable.

**6.5.2** Tinted lenses in safety glasses, including photo-gray lenses, are permissible only when prescribed for corrective purposes or specifically approved by the “Qualified Person/Competent Person”.

**6.6 Side Shields** should be used on safety glasses worn in buildings or areas designated as eye-hazard areas. Side shields should also be used on safety glasses worn in eye-hazard operations, unless it has been specifically determined for a particular operation that it is not possible for injurious objects or energies to enter the wearer’s eyes from the side or that the reduced peripheral vision would pose a greater hazard to the employee.

**6.6.1** Side shields shall not be easily detachable from the frames: slip-on types of sideshields are not permitted for use on any Hilscher-Clarke worksite.

**6.6.2** Snap-on side shields are permissible **only** if they are clearly marked with the ANSI symbol and fit tightly, with no gapping or sliding movement, onto the glasses frames.

- 6.7** Visitors or other company employees, who wear contact lenses, must wear ANSI approved eye protection over the contact lenses.
- 6.8 Fitting** – Fitting of goggles and safety glasses should be done by someone skilled in the procedure. Prescription safety glasses should be fitted only by Qualified Optical Personnel.
- 6.9 Inspection & Maintenance:**
- 6.9.1** It is essential that the lenses of eye protectors be kept clean. Continuous vision through dirty lenses can cause eye strain – often an excuse for not wearing the eye protection.
- 6.9.2** Daily inspection and cleaning of the eye protector with soap and hot water, or with a cleaning solution and tissue is recommended.
- 6.9.3** Pitted lenses, like dirty lenses, can be a source of reduced vision and they should be replaced. Deep scratches or excessively pitted lenses are apt to break more readily.
- 6.9.4** Slack, worn out, sweat-soaked, or twisted headbands do not hold the eye protector in proper position. Visual inspection can determine when the headband elasticity is reduced to a point beyond proper function.
- 6.9.5** Goggles should be kept in a case when not in use. Safety glasses, in particular, should be given the same care as one's own glasses, since the frame, nose pads, and temples can be damaged by rough usage.
- 6.9.6** Personal protective equipment, that has been previously used, will be disinfected before being issued to another employee. Even when each employee is assigned protective equipment for extended periods, it is recommended that such equipment be cleaned and disinfected regularly.
- 6.9.7** Several methods for disinfecting eye-protective equipment are acceptable. The most effective method is to disassemble the goggles or spectacles and thoroughly clean all parts with soap and warm water. Carefully rinse all traces of soap, and replace defective parts with new ones. You may also:
- Swab thoroughly or completely immerse all parts for 10 minutes in a solution of germicidal deodorant fungicide.
  - Remove parts from solution and suspend in a clean place for air drying at room temperature or with heated air.
  - Do not rinse after removing parts from the solution because this will remove the germicidal residue, which retains its effectiveness after drying.
  - The dry parts or items should be placed in a clean, dust-proof container, such as a box, bag, or plastic envelope, to protect them until reissue.
- 6.9.8** A cleaning solution of 9 parts water to 1 part bleach is also acceptable. Rinse protective equipment and air dry as normal. Place in a protective container (i.e., zip lock bag).

## 7.0 Hand & Arm Protection

Hand and arm injuries are a significant component of workplace injuries. Hands and fingers are used to accomplish nearly all workplace activities and must be protected from injuries.

- 7.1** Hilscher-Clarke requires all employees to use appropriate hand and arm protection when employees' hands and arms are exposed to hazards such as:
- Skin absorption of harmful substances;
  - Severe cuts or lacerations;
  - Severe abrasions;
  - Punctures;
  - Chemical Burns;
  - Thermal Burns & Harmful Temperature Extremes
- 7.2** The required hand and arm protective wear will be based upon the hazard of the risk. **Table 4** presents details on the types of hand and arm protective wear used by Hilscher-Clarke. (*For further details on electrical protection gloves and sleeves, reference Hilscher-Clarke's Electrical Safety Program*).
- 7.3** It is important to know the performance characteristics of gloves and arm protectors relative to the specific hazard anticipated. These performance characteristics should be assessed by using standard test procedures. Before purchasing gloves and arm protectors, Hilscher-Clarke will request documentation from the manufacturer that the gloves and arm protectors meet the appropriate test standard(s) for the hazard(s) anticipated.
- 7.4** Factors to be considered for glove and arm protectors selection in general include:
- 7.4.1** As long as the performance characteristics are acceptable, in certain circumstances, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types.
- 7.4.2** Work activities of the employee will be studied to determine the degree of dexterity required, the duration, frequency, and degree of exposure of the hazard, and the physical stresses that will be applied.
- 7.4.3** When choosing gloves and arm protectors for protection against chemical hazards:
- Toxic properties of the chemical(s) will be determined;
  - Generally, any "chemical resistant" glove or arm protector can be used for dry powders;
  - For mixtures and formulated products (unless specific test data is available), a glove and/or arm protector will be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric materials.
  - Employees must be able to remove the gloves and arm protectors in such a manner as to prevent skin contamination.
- 7.5 Reusable gloves and arm sleeves** shall be inspected regularly for damage and replaced when necessary.
- 7.5.1** They shall be stored in a protected location away from chemical exposure when not in use.
- Employees will avoid wearing contaminated gloves and arm sleeves outside the immediate operation area to prevent spreading contamination.

## 7.0 Hand & Arm Protection (cont.)

### 7.6 Heat-Resistant gloves and arm sleeves.

**7.6.1** Asbestos gloves and arm sleeves are not permitted for use on any Hilscher-Clarke worksite.

**7.6.2** In cases of extreme heat exposure, Hilscher-Clarke will supply a silica-based glove and arm sleeve that will provide heat protection to 1100°C.

**7.7 Creams** – Gloves are usually the method of choice for protecting hands from chemical hazards. However, under some circumstances, properly used protective hand creams are also effective barriers against skin irritants. Frequent application and removal ensure the most effective results. Washing with soap and water, which removes both the cream and whatever may be dissolved in it, shall always be done before eating and smoking to prevent hand-to-mouth contamination. There are two basic types of cream available:

**7.7.1 Water Repellent Cream** – Protects skin from water and chemicals dissolved in water;

**7.7.2 Water-miscible Cream** – Protects skin from dry substances and nonaqueous materials.

**Table 4**

**Hand and Arm Protective Wear**

Type/Hazard	Protection Provided
<b>Cut-Resistant</b>	This type of glove is used where protection against cuts is required. Plastic dots can be adhered to the metal mesh to facilitate gripping. Another type of cut-resistant glove combines stainless steel with cut-resistant fiber wrapped with nylon fibers for enhanced flexibility and surface softness. These materials resist knives, glass, sheet metal, sharp edges, and other cutting surfaces. They are cut-resistant but not cut-proof or puncture proof. These materials must not be subjected to high speed knives or serrated blades
<b>High &amp; Low Temperatures</b>	Gloves, mittens, and arm and sleeve protectors are available in a wide variety of materials. Leather is a common welder's glove material. Heavy duty terry cloth gloves can provide heat protection of up to 350 degrees F. For extreme high and low temperature protection, specially processed silica fiber cloth (non-asbestos) can withstand temperatures of from -100 degrees F to 1100 degrees F. Do not use asbestos gloves.
<b>Splinters, Cuts, Abrasions, &amp; General Use</b>	Light weight pigskin, goatskin, or calfskin leather gloves enable dexterity and grip while offering some resistance to cuts and abrasions. Other materials, which offer similar protection, include laminated nitrile coating on stretch fabric, vinyl, rubber coated or impregnated fabrics.
<b>Electrical Protection</b>	Rubber devices that protect against electrical shock must meet the ANSI J6 series standards. Rubber insulating gloves must meet ANSI J6.6. These gloves are available to meet different voltage exposures. Light weight low voltage gloves are for use on voltages of under 1000V. Gloves for use on high voltage are of thicker material for the dielectric strength. As the voltage rating increases, so does the glove weight. Leather glove protectors are available to protect rubber gloves against punctures and abrasion. Employees who use this type of equipment must be qualified [see Hilscher-Clarke's Electrical Safety Plan or reference 29 CFR 1910.331 (a)]. Rubber gloves must be visually inspected and an "air" test must be performed before they are used.

## 7.0 Hand & Arm Protection (cont.)

Table 4 (cont.)

### Hand and Arm Protective Wear (cont.)

Type/Hazard	Protection Provided
<b>Repetitive Motion And Vibration</b>	Protective gear is available to minimize repetitive hand and wrist motions. One glove has openings for the fingers but offers palm protection. These anti-vibration gloves may be worn under regular work gloves.
<b>Chemicals</b>	Glove materials used to protect against chemicals include natural rubber, neoprene, polyvinyl chloride, polyvinyl alcohol, and nitrile. Table 5 shows recommended glove materials for use with various chemical hazards. Many operational variables may affect the performance of chemical protection gloves, including chemical combinations and concentrations, temperature, and exposure time.

Table 5

### Recommended glove materials for use with various chemical hazards.

Chemical Hazards	Butyl	Neo-prene <sup>a</sup>	Nitrile <sup>b</sup>	Polyvinyl Chloride	Polyvinyl Alcohol	Latex	Poly-ethylene	Viton
Acids, dilute	+	+	+	+	-	+	-	+
Alcohol	+	+	+	+	-	+	+	+
Alkali (bases), dilute	+	+	+	+	-	+	-	+
Aromatics	-	-	-	-	+	-	-	+
Chlorinated Hydrocarbons	+	-	+	-	+	-	-	+
Epoxy Resins	+	+	+	+	-	-	-	+
Esters	+	-	-	-	-	-	-	-
Hydrocarbons	+	+	+	-	+	-	-	+
Ketones (acetone, MEK, etc.)	+	-	-	-	-	-	-	-
Lacquer thinner	+	+	+	-	+	-	-	+
Oils, Grease	+	+	+	+	+	-	-	+
Petroleum Distillates, Mineral	+	+	+	-	+	-	-	+
PCB's	-	-	-	-	-	-	-	+

<sup>a</sup> Platex gloves, which are made of neoprene and latex, can be classified with neoprene.

<sup>b</sup> Also called Bune-N.

**+** Recommended

**-** Not Recommended

Research on glove materials shows that:

- (1) Each glove material temporarily resists solvent breakthrough, but eventually some permeation will result.
- (2) The same glove material from different suppliers may vary in its permeation characteristics.
- (3) A glove that swells indicates excessive permeation has occurred.
- (4) Disposable gloves will be discarded after each use.

## 8.0 Ear Protection

Exposure to high noise levels will cause hearing loss or impairment. It can create physical and psychological stress. There is no cure for noise-induced hearing loss, so the prevention of excessive noise exposure is the only way to avoid hearing damage. Specifically designed protection is required, depending on the type of noise encountered (*See Appendix E for further information*).

- 8.1** Sound level surveys will be conducted to identify potentially hazardous areas and occupations or job tasks that have the potential for overexposure. Such surveys will be conducted in accordance with Hilscher-Clarke's "Occupational Noise Exposure Plan".
- 8.2** No employee shall be permitted to work in an area where the sound level exceeds 85 decibels (A scale) unless hearing protection that reduces the exposure to a level below 85 decibels (85 dbA) is worn.
- 8.3** Warning signs shall be posted in any location where the sound level exceeds 85 dbA.



- 8.4** All types of heavy equipment (dozers, loaders, graders, mixers, etc.) require hearing protection unless specifically instructed otherwise.
  - 8.4.1** This equipment is subject to ongoing testing by a "Competent Person" and employees will be advised on an individual basis.
- 8.5** Performed or molded ear plugs should be individually fitted by a professional. Waxed cotton, foam, or fiberglass wool earplugs are self-forming. When properly inserted, they work as well as most molded earplugs.
- 8.6** Some earplugs are disposable, to be used one time and then thrown away. The non-disposable type should be cleaned after each use for proper protection. Plain cotton is ineffective as protection against hazardous noise.
- 8.7** Earmuffs need to make a perfect seal around the ear to be effective. Glasses, long sideburns, long hair, and facial movements, such as chewing can reduce protection. Special equipment is available for use with glasses or beards.
- 8.8** For extremely noisy situations, earplugs should be worn in addition to earmuffs. When used together earplugs and earmuffs change the nature of sounds;
  - 8.8.1** All sounds are reduced including one's own voice, but other voices or warning signals are easier to hear.

## 9.0 Foot & Leg Protection

- 9.1 Employees will wear protective footwear when working in areas where there is a danger of foot injuries from heavy falling objects, rolling objects, objects piercing the soles, and where employees' feet are exposed to electrical hazards.
- 9.2 All protective footwear must comply with ANSI Z41-1991.
- 9.3 There are many styles of shoes available as well as different materials and construction.
  - 9.3.1 Special safety shoes without laces or eyelets and with leather or heat and flame resistant material can be obtained for protection where molten metal and/or welding sparks are a hazard;
  - 9.3.2 Where there is a hazard from protruding nails or sharp objects on the walking surface, safety shoes should be equipped with metal inner soles.
  - 9.3.3 For electrical workers and those who have to work in electrical hazard classified locations, nonmetal toe guards, eyelets, and other shoe construction components are available.
- 9.4 Lightweight metal or plastic toe and/or instep shoe caps offer protection where marginal foot hazards exist. These devices can be quickly slipped on over safety or street shoes. *They are not intended to replace safety shoes.*
  - Wearers of these shoe caps should be warned of the potential tripping hazard these type of devices can present.
- 9.5 Aluminum alloy, fiberglass, or galvanized steel footguards can be worn over usual workshoes, although they present the possibility of catching on something and tripping workers.
- 9.6 Heat-resistant soles protect against hot surfaces like those found when roofing, paving and working with hot metal.
- 9.7 Storm rubbers, which slip over the safety shoe, provide a non-skid tread for fall protection on slippery walking surfaces. Storm rubbers also provide excellent protection for inside or outside work where water, oil, or chemicals could damage the safety shoe outer shell.
- 9.8 Over-the-sock or over-the-safety shoe boots are available. Boot outer shell materials include PVC, rubber, butyl, and neoprene. Temperature, abrasion, and chemical exposures in the workplace must be considered in the selection of the material (see Table 5 in Section 7.0).
- 9.9 Protective spats and leggings offer protection against high heat, flame, molten metal splashes, hot sparks, and chainsaw cuts. Material construction includes leather, flame retardant duck, aluminized rayon, and other aluminized fabrics.
  - 9.9.1 Quick release legging velcro closures should be used when any emergency would require the legging to be quickly removed.

## 10.0 Torso Protection

- 10.1** Many hazards threaten the torso. Protective garments such as vests, jackets, aprons, coveralls, and full body suits may be necessary to protect employees who handle hot and/or hazardous materials.
- 10.1.1** When a need for such a garment is identified, it shall be furnished by Hilscher-Clarke
- 10.2 Selection.** The type of garment that will provide the best protection for a job will depend on the nature of the job and the physical and chemical hazards associated with the job.
- 10.2.1** Wool and specially treated cotton are two natural fibers, which are fire-resistant and comfortable since they adapt well to changing workplace temperature.
- 10.2.2** Duck, a closely-woven cotton fabric, is good for light duty protective clothing. It can protect against cuts and bruises on jobs where employees handle heavy, sharp, or rough material.
- 10.2.3** Heat-reflecting clothing such as leather is often used to guard against dry heat and flame.
- 10.2.4** Rubber and rubberized fabrics, neoprene, and plastics give protection against some acids and chemicals.
- 10.2.5** Disposable suits of paper-like material are particularly important for protection from dusty materials or materials that can splash. If the substance is extremely toxic, a completely enclosed suit will be necessary. The clothing must be inspected to assure proper fit and function for continued protection.

## 11.0 Respiratory Protection

- 11.1** The workplace can present hazards to the lungs. Some of the most common hazards are:
- The lack of oxygen; and
  - The presence of harmful dust, fogs, smokes, mists, fumes, gases, vapors, or sprays.
- 11.2** Respirators prevent the entry of harmful substances into the lungs during breathing. Some respirators also provide a separate supply of breathable air so work can be performed where there is inadequate oxygen, or where greater protection is needed.
- 11.3** The prevention of atmospheric contamination at the worksite should be accomplished as far as feasible by engineering control measures:
- Enclosing or confining the contaminant producing operation;
  - Exhausting the contaminant; or
  - Substituting with less toxic materials.
- 11.4** When effective engineering controls are not feasible, while those controls are being installed, or during clean up operations, appropriate respirators will be used.
- 11.4.1** The respirator user will be instructed that respirators have their limitations and are not substitutes for effective engineering controls.
- 11.4.2** Where respirators are necessary for health protection, specific procedures are necessary to overcome any potential deficiencies and to assure the effectiveness of the equipment.
- 11.5** Hilscher-Clarke has established an effective “Respiratory Protection Plan” – different hazards require different respirators – and employees must be medically approved before being issued certain forms of respiratory protection.
- 11.5.1** No employee shall wear a respirator until he or she has completed the Respiratory Control Program as outlined in Hilscher-Clarke’s Respiratory Protection Plan.

## 12.0 Traffic Safety Vests

- 12.1** Every Hilscher-Clarke employee shall wear an approved reflective fluorescent safety vest or, equivalent (see 12.2), under the following conditions:
- When working within a road allowance or on a public way;
  - When working on a project where the wearing of a traffic safety vest is required under the Occupational Health & Safety Act and the Regulations for Construction Projects. This includes the directing of traffic;
  - In any other location or situation where the Employee may be endangered by vehicular traffic or where being visible is important to his/her safety.
- 12.2** For the purposes of this plan, approved equivalents to a traffic safety vest are T-shirts, jackets, overalls and other approved apparel, which is safety (“blaze”) orange or red in color with reflective tapes on the front and back. Approved means that the clothing has been reviewed and approved for use by a Supervisor or “Competent Person”.

## 13.0 PPE & Heat Stress

- 13.1** Wearing PPE puts a worker at considerable risk of developing heat stress. This can result in health effect ranging from transient heat fatigue to serious illness or death. Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload and the individual characteristics of the worker.
- 13.2** Individuals vary in their susceptibility to heat stress. Factors that may predispose someone to heat stress include:
- Lack of physical fitness
  - Lack of acclimatization
  - Age
  - Dehydration
  - Obesity
  - Alcohol & Drug use
  - Infection
  - Sunburn
  - Diarrhea
  - Chronic Disease
- 13.3** Reduced work tolerance and increased risk of excessive heat stress is directly influenced by the amount and type of PPE worn. PPE adds weight and bulk, severely reduces the body's access to normal heat exchange mechanisms (i.e., evaporation, convection, and radiation), and increases energy expenditure.
- 13.4** When selecting PPE, each item's benefit will be carefully evaluated in relation to its potential for increasing the risk of heat stress. Once PPE is selected, the safe duration of work/rest periods will be determined based on the:
- Anticipated work rate;
  - Ambient temperature and other environmental factors;
  - Type of protective ensemble;
  - Individual worker characteristics and fitness – physical fitness is a major factor influencing a person's ability to perform work under heat stress. The better fit someone is, the more work he/she can safely perform.
- 13.5** At a given level of work, a fit person, relative to an unfit person, will have:
- Less physiological strain;
  - A lower heart rate;
  - A lower body temperature, which indicated less retained body heat (a rise in internal temperature precipitates heat injury);
  - A more efficient sweating mechanism;
  - Slightly lower oxygen consumption;
  - Slightly lower carbon dioxide production.
- 13.6** The degree to which a worker's body has physiologically adjusted or acclimated to working under hot conditions affects his or her ability to do work. Acclimatized individuals generally have lower heart rates and body temperatures than unacclimatized individuals, and sweat sooner and more profusely. This enables them to maintain lower skin and body temperatures at a given level of environmental heat and work loads than unacclimatized workers.

# Appendix



<b>I am reviewing (check the appropriate box):</b>	<b>A Worksite</b>	<b>Specify Location:</b>		
	<b>Single Employee's Job Description</b>	<b>Name of Employee:</b>		
		<b>Working Title of Position:</b>		
		<b>Other Description:</b>		
	<b>Job Description For A Class of Employees</b>	<b>Working Title of Position:</b>		
<b>Other Description:</b>				
<b>Name of Person Completing Form:</b>		<b>Title of Person Completing Form:</b>		<b>Date:</b>
<b>Eye Hazards</b>	<b>Eye Hazards</b> – Tasks that can cause eye injury include: working with chemicals or acids; chipping, sanding, or grinding; welding; furnace operations; and, metal and wood working.			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Chemical Exposure	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	High Heat/Cold	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Dust/Flying Debris	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Impact	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Light Radiation	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Head Hazards</b>	<b>Head Hazards</b> – Tasks that can cause head injury include: working below other workers who are using tools or materials that could fall; working on energized electrical equipment or utilities; and, working in trenches or confined spaces.			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Impact	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Electrical Shock	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Noise Hazards</b>	<b>Noise Hazards</b> – Personnel may be exposed to noise hazards when machining, grinding, sanding, using pneumatic equipment, generators, motors, jackhammers, or similar equipment. <b>ADDITIONAL TRAINING/MONITORING IS REQUIRED!</b>			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Noise Hazard	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	<input type="checkbox"/> Yes <input type="checkbox"/> No			

<b>Foot Hazards</b>	<b>Foot Hazards</b> – Tasks that can cause foot injury include: exposure to chemicals or acids; welding or cutting; foundry operations; materials handling; renovation or construction; electrical work; and spray finishing or other work with flammable or explosive materials.			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Chemical Exposure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	High Heat/Cold	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Impact/Compression	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Slips/Trips	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Puncture	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Slippery/Wet Surfaces	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Electrical	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Explosive/Flammable Atmosphere.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<b>Hand Hazards</b>	<b>Hand Hazards</b> – Hand injury can be caused by: work with chemicals or acids; exposure to cut or abrasion hazards (i.e., during demolition, renovation, or woodworking); and work with vary hot or cold objects or materials. <b>BLOODBORNE PATHOGENS – ADDITIONAL TRAINING/MONITORING IS REQUIRED!</b>			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Chemical Exposure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	High Heat or Cold	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Cuts/Abrasion	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Puncture	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Electric Shock	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Bloodborne Pathogens	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

<b>Body/Torso Hazards</b>	<b>Body/Torso Hazards</b> – Injury of the body or torso occur during: exposure to chemicals, acids, or other hazardous materials; abrasive blasting; welding, cutting, brazing; chipping, sanding, or grinding; use of chainsaws or similar equipment; foundry operations; and, work around electrical arcs.			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Chemical Exposure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Extreme Heat/Cold	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Abrasion	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Impact	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Electrical Arc	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<b>Respiratory Hazards</b>	<b>Respiratory Hazards</b> – Personnel may be exposed to respiratory hazards that require the use of respirators: when using certain chemicals outside of chemical fume hood; when applying paints or chemicals in confined spaces; when welding, cutting, or brazing on certain metals; and, when disturbing asbestos, lead, silica, or other particulate hazards. <b>ADDITIONAL TRAINING/MONITORING IS REQUIRED!</b>			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Chemical Exposure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Confined Space Work	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Particulate Exposure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	Welding/Related Hazard	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<b>Fall Hazards</b>	<b>Fall Hazards</b> – Personnel may be exposed to fall hazards when performing work on a surface with an unprotected side or edge that is; 4 feet (general industry), 6 feet (construction), or 10 feet (scaffold work) above a lower level – always consult the appropriate CFR – Fall protection may also be required when using vehicle manlifts, elevated platforms, tree trimming, performing work on poles, roofs, or fixed ladders. <b>ADDITIONAL TRAINING/MONITORING IS REQUIRED!</b>			
	<i>Check the appropriate box for each hazard:</i>		<i>Description of Hazard(s)</i>	<i>Based upon the hazard assessment, the following PPE is required:</i>
	Fall Hazard	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		
<b>Notes:</b>				

## Tasks With Potential Exposure to Hazardous Materials or Physical Agents

Project Identification (i.e., name, contract number, etc.):		Physical Address/Location:	
Date of Analysis:	Name of Person Performing Analysis:	Title of Person Performing Analysis:	
Tasks	Name of Material Or Physical Agent	Location of Material Or Physical Agent	
Analysis Reviewed By:	Signature:	Date Analysis Reviewed:	
Analysis Approved By:	Signature:	Date Analysis Approved:	

## Job Inventory of Hazardous Chemicals

Project Identification (i.e., name, contract number, etc.):		Physical Address/Location:	
Date of Analysis:	Name of Person Performing Analysis:	Title of Person Performing Analysis:	
Name of Chemicals	Route of Entry And Physical State	Controls	
Analysis Reviewed By:	Signature:	Date Analysis Reviewed:	
Analysis Approved By:	Signature:	Date Analysis Approved:	



*Safety is an integral part of every job and not a separate entity.*

## Job Topics To Consider

### The Importance of Hazard & Job Safety Analysis

#### What is a Job Hazard Analysis?

A job hazard analysis (JHA) is a procedure which helps integrate accepted safety and health principles and practices into a particular operation. In a JHA, each basic step of the job is examined by a person capable of identifying the potential hazards and can determine the safest way to do the job. Other terms used to describe this procedure are job safety analysis (JSA) and job hazard breakdown.

#### What are the benefits of doing a Job Hazard Analysis?

Initial benefits from developing a JHA will become clear in the preparation stage. The analysis process may identify previously undetected hazards and increase the job knowledge of those participating. Safety and health awareness is raised, communication between workers and supervisors is improved, and acceptance of safe work procedures is promoted.

#### How do I determine which job(s) to do a Job Hazard Analysis on?

Ideally all jobs should be subjected to a JHA. But in reality this is just not always possible. It is usually necessary to identify which jobs are a priority and need to be analyzed immediately. Even if analysis of all jobs is planned, this step ensures that the most critical jobs are examined first.

#### Factors to be considered in assigning a priority for analysis include:

- > **Accident frequency and severity:** jobs where accidents occur frequently or where they occur infrequently but result in disabling injuries.
- > **Potential for severe injuries or illnesses:** the consequences of an accident, hazardous condition, or exposure to harmful substance are potentially severe.
- > **Newly established jobs:** due to lack of experience in these jobs, hazards may not be evident or anticipated.

#### How Do I Identify Potential Hazards?

Once the basic steps have been recorded, potential hazards must be identified at each step. Based on observations of the job, knowledge of accident and injury causes, and personal experience, list the things that could go wrong at each step. The following questions can help you identify potential hazards:

1. Can any body part get caught in or between objects?
2. Do tools, machines, or equipment present any hazards?
3. Can the worker make harmful contact with objects?
4. Can the worker slip, trip, or fall?
5. Is the worker exposed to extreme heat or cold? Do weather conditions affect safety?
6. Is excessive noise or vibration a problem?
7. Is there a danger from falling objects?
8. Can contact be made with hot, toxic, or caustic substances?
9. Are there dusts, fumes, mists, or vapors in the air?

When analyzing a job, break it down into areas and ask yourself the important question for each topic:

- > **Working With Chemicals:** Is the material toxic? What PPE is required (check the MSDS).
- > **Respiratory Protection:** What type of respirator? Correct cartridge? Have employees been fit tested for this type of respirator?
- > **Hazardous Waste:** Are approved containers available? Are the containers properly labeled? Emergency contact posted for accidental releases and/or spills?
- > **Confined Spaces:** Permit posted? Respiratory protection needed? Air monitor recently calibrated? Emergency retrieval devices needed?
- > **Grinding/Chipping:** All combustibles, flammables removed? PPE?
- > **Work in elevated areas:** Safety harness required? Ladder secured? Safety net needed?
- > **Working below grade level:** Barricade tape? Information tags? PPE? Shoring?
- > **Hot Work:** Permit required? Fire Watch required? Fire extinguisher available? Flash shields needed?

When possible, eliminate the hazard.

- Change a different process or modify an existing one.
- Substitute with less hazardous substance.
- Improve environment (ventilation)
- Modify or change equipment or tools

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# HEAD PROTECTION

## Anatomy of a Hard Hat

Each year there are thousands of head injuries in the construction industry. Injuries range from concussions to death. Head injuries are caused by falling, flying, swinging or dangling objects, by bumping your head against a fixed object and by electrical shocks and burns. Hard hats are specifically designed to resist penetration and absorb the shock of a blow.

- ▶ Approved Hard Hats are made of materials, such as thermoplastics or fiberglass, that are water-resistant and slow-burning.
- ▶ Inside the hat are straps that pass over your head and connect to an adjustable headband. These straps hold the shell of the hat away from your head. There should be an inch and a quarter between you and the shell.
- ▶ The outer shell and the unique inner suspension system of a hard hat protect you from injury by absorbing and distributing impact over a wide area of your head.
- ▶ Hard Hats are made in two types:
  - ▶ Type 1 - helmets with full brim, not less than 1¼ inches wide; and
  - ▶ Type 2 - brimless helmets with a peak extending forward from the crown.
- ▶ Chin and nape straps keep the hat from being bumped or blown off.

## Types of Hard Hats

- ☒ **Class A** - Hats & Caps are intended for protection against impact hazards. They are typically used in mining, building construction, shipbuilding, tunneling, lumbering, and manufacturing.
- ☒ **Class B** - Utility Service Hats & Caps are for protection of the wearer's head from impact and penetration from falling or flying objects and from high-voltage shock and burn. They are used extensively by electrical workers.
- ☒ **Class C** - offers lightweight protection against impact and penetration hazards when there's no danger from electrical hazards.



## Tips To Remember

- ▶ Be sure to select the proper type of hard hat for your job.
- ▶ Make sure your hard hat is marked with the American National Standards Institute label (ANSI Z89.1) next to the manufacturer's name, and a Class A or B marking.
- ▶ Never use the space between the suspension straps and the hard hat as a storage area.
- ▶ Avoid wearing headgear under your hard hat, except for cold-weather liners specially designed for it.
- ▶ Never borrow a hard hat or loan yours.
- ▶ Adjust your hard-hat straps to fit you snugly. Your hard hat should not tilt or slide around.
- ▶ Check your hard hat daily for signs of damage such as dents, cracks or penetration.
- ▶ Never use your hard hat if you find any signs of damage.
- ▶ Replace any worn or frayed webbing.
- ▶ Never drill holes in your hard hat for ventilation or any other reason.
- ▶ Avoid dropping your hard hat.
- ▶ Get a replacement hard hat if it's ever dropped or hit.
- ▶ Never store your hard hat in your car window or other hot place: sunlight and heat reduce the hat's protective ability.
- ▶ Follow the manufacturer's instructions for cleaning and periodic inspection of your hard hat.
- ▶ Never paint your hard hat; certain paints and thinners can damage and weaken it.



# HEARING PROTECTION

Noise can be more than a nuisance. It may cause you to lose your hearing — either temporarily or permanently. The severity of hearing loss depends on:

- ◆ How loud the noise is (intensity);
- ◆ How high-pitched the noise is (frequency);
- ◆ How long you are exposed to the noise — hourly, daily, weekly, monthly;
- ◆ Whether the noise is continuous (impact every second or less) or intermittent;
- ◆ The age of the person exposed to the noise; individual susceptibility of the person exposed to the noise.

## Types of Earplugs

- Formable earplugs - come in two varieties, the disposable kind made of waxed cotton or acoustical fibers that can be molded to your ears, and the semi-disposable type made of molded foam, which can be used for up to a week.
- Premolded earplugs- are made of soft silicone rubber or plastic and are reusable.
- Custom-molded earplugs - are molded to fit the individual by inserting silicone rubber or plastic molding compound into each ear and allowing it to set. The compound may then be used as earplugs or as molds for earplugs.

## Using Earplugs

- Earplugs screen out harmful noise while allowing you to hear your coworkers.
- Earplugs can reduce noise levels by up to 30 decibels.
- Check the Noise Reduction Rating (NRR) on your earplugs' package. The higher the number, the better the protection.
- Earplugs are lightweight, inexpensive and low-maintenance.
- Earplugs are the protectors of choice for work in hot, enclosed environments or in situations where you keep hearing protectors on all day.
- They're easily worn with eyeglasses and hard hats and other head protection.
- Follow the manufacturer's instructions exactly when inserting earplugs.
- To work properly, earplugs must completely fill your ear canal.
- Make sure your hands are clean when inserting earplugs. Dirt and oils could cause an infection.
- Keep reusable earplugs clean by washing them after each use in warm, soapy water.

## Types of Earmuffs

- Earmuffs consist of cushioned cups made of molded plastic filled with foam, liquid or air that are attached to a band that can be worn over your head, behind your neck or under your chin.
- Cap-mounted earmuffs can be attached to hard hats.
- Dielectric earmuffs have no metal parts, for workers exposed to high voltage.
- Electronic earmuffs reduce hazardous noises while magnifying sounds you need to hear.

## Using Earmuffs

- Earmuffs reduce noise by about 20-30 decibels.
- The NRR on your earmuffs indicates their effectiveness.
- Inspect the condition of your earmuffs before each use.
- Your earmuffs should fit comfortably, without the headband being too tight or too slack.
- Earmuff cups should adjust up and down and in and out for a good fit.
- To work correctly, earmuffs must form a seal around your ears, completely enclosing them, without pinching your earlobes.
- No hair or clothing should stick out from under the cups.
- You can use earplugs with earmuffs for added protection.
- Follow the manufacturer's instructions for proper cleaning and storage.
- Be sure to replace hardened, cracked, or worn earmuff cushions.



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# Foot Protection

## Potential Hazards

### Impact Injuries

At work, heavy objects can fall on your feet. If you work around sharp objects, you can step on something sharp and puncture your foot.

### Injuries From Spills & Splashes

Liquids such as corrosives and molten metals can spill into your shoes and boots. These hazardous materials can cause chemical and heat burns.

### Compression Injuries

Heavy machinery, equipment, and other objects can roll over your feet. The result of these types of accidents is often broken or crushed bones.

## Preventive Measures

### Housekeeping

Poorly maintained machinery and tools, sloppy work areas, and cluttered aisles all contribute to foot injuries.

**Safety Shoes & Boots**—There are many types of footwear that are designed to protect your feet.

- ♦ **Steel Toe Footwear**—Protects your toes from falling objects and from being crushed.
- ♦ **Metatarsal Footwear**—Have special guards that run from your ankle to your toes and protect your entire foot.
- ♦ **Reinforced Sole Footwear**—Have metal reinforcement that protects your foot from punctures.
- ♦ **Latex/Rubber Footwear**—Resists chemicals and provides extra traction on slippery surfaces.

### Electrical Shock

Accidents involving electricity can cause severe shocks and burns.

### Extremes in Cold, Heat, & Moisture

If not protected, your feet can suffer from frostbite if you must work in an extremely cold environment. Extreme heat, on the other hand, can blister and burn your feet. Finally, extreme moisture in your shoes or boots can lead to fungal infections.

### Slipping

Oil, water, soaps, wax, or other chemicals can cause you to slip and fall.

- ♦ **PVC Footwear**—Protects your feet against moisture and improves traction.
- ♦ **Butyl footwear**—protects against most ketones, aldehydes, alcohols, acids, salts, and alkalis.
- ♦ **Vinyl Footwear**—Resists solvents, acids, alkalis, salts, water, grease, and blood.
- ♦ **Nitrile Footwear**—Resists animal fats, oils and chemicals.
- ♦ **Electrostatic Dissipating Footwear**—Conducts static electricity to floors that are grounded.
- ♦ **Electrical Hazard Footwear**—Insulated with tough rubber to prevent shocks and burns from electricity.
- ♦ **Disposable Footwear**—Includes shoe slip-ons and clear polyethylene and non-woven booties used in dust free work areas.

## Wearing & Using Safety Footwear

- Select and use the right kind of footwear for the job you are going to be performing. Footwear should meet or exceed the standards set by ANSI Z41-1991.
- Avoid footwear made of leather or cloth if you work around acids or caustics. These chemicals quickly eat through the leather or cloth, and can injure your feet.
- Select footwear that fits.
- Inspect your footwear before use. Look for holes and cracks that might leak.
- Replace footwear that is worn or torn.
- After working with chemicals, hose off your footwear with water to rinse away any chemicals or dirt before removing footwear.
- Avoid borrowing and sharing footwear.
- Store footwear in a clean, cool, dry, ventilated area.



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# PPE Checklist

On a construction site there may be hazards that are not completely eliminated by the usual methods. When these situations arise, specific Personal Protective Equipment (PPE) may be needed. Your PPE can save you from injury and even save your life. Follow these guidelines for using PPE:

- ▶ Wear your personal protective equipment properly. Ask your supervisor if you're not sure how to use it.
- ▶ If working at an existing facility instead of a construction site, always check with your supervisor for any rules the customer may have for PPE guidelines.
- ▶ Use Equipment that fits you properly
- ▶ Keep your equipment clean.
- ▶ Decontaminate your equipment when necessary.
- ▶ Follow guidelines for removing contaminated PPE.
- ▶ Check your gear for leaks, tears, cracks and other signs of wear before use.
- ▶ If your equipment is defective, repair or replace it before use.
- ▶ Report any health problems while using your protective equipment.
- ▶ Never wear street-wear eyeglasses in place of certified ANSI Z87 Safety Glasses.
- ▶ Never store your hard hat in a car, window or other hot place. The sun and heat can reduce its effectiveness.
- ▶ Avoid wearing jewelry or long, full or loose clothing with flaps that can catch in machinery.
- ▶ Avoid wearing fuzzy or flammable synthetic clothing around flames or sparks.
- ▶ Avoid wearing slick-soled shoes, loose or frayed shoelaces or long hems that can make you slip or trip.
- ▶ Wear clean clothing. Oily and greasy clothes catch fire more easily and dust and grease can irritate your skin.
- ▶ Dress for weather. Wear wool, tightly woven, insulated or layered waterproof clothing for cold and wet weather. In hot weather, wear sunscreen, a hat and lightweight, breathable cotton that protects your skin from sunlight.

**Dress For The Job**



Some examples of PPE are:

- ▶ **Face & Eye Protection** - safety glasses, goggles, shields, welding & laser protection.
- ▶ **Head Protection** - hard hats capable of protection against impact & electrical shocks & burns.
- ▶ **Hearing Protection** - ear plugs (foam & solid) and ear muffs.
- ▶ **Protective Footwear** - safety shoes, rubber boots, metatarsal guards, slip-resistant soles.
- ▶ **Respiratory Protection** - filter respirators, cartridge respirators, supplied-air respirators, & self-contained breathing apparatus.
- ▶ **Body Harness and Lanyards & Lifelines.**
- ▶ **Special Clothing** - chemical protective clothing (CPC), hot/cold environment clothes & high visibility clothing (traffic vests).

Use only PPE products that have received approval through recognized safety equipment testing agencies or labs. Examples are:

ANSI - American National Standards Institute  
NIOSH - Nat'l Institute for Occupational Safety & Health  
SEI - Safety Equipment Institute

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