# **Personal Protective Equipment (PPE): Body Protection**

## Hazards

Based on your workplace's hazard assessment, you must wear body protection whenever hazards are present that could cause bodily injury, such as:

- Intense heat/cold
- Splashes of molten metal and other hot liquids
- Impacts or cuts from tools, machinery and materials
- Hazardous chemicals
- Blood and other potentially infectious material (OPIM)
- Radiation
- Electrical hazards such as burns from arcing

PPE may not prevent all injuries but can reduce the severity of an injury.

## Types of Body Protection

To protect against specific hazards, you may need to wear one or more of the following:

- Vests for cooling purposes, visibility and abrasion protection
- Jackets that provide a thermal barrier, offer high visibility or are flame-resistant
- High-visibility safety apparel
  - Required when working in certain environments such as construction sites, areas with heavy machinery and vehicles, and places where work is carried out in poorly lit areas
  - Must meet ANSI/ISEA 107 standard (Class 1, 2, 3)
- Aprons
- Coveralls
- Surgical gowns, smocks and lab coats
- Fully encapsulating body suit
- Electrical protective suit
- Skin protection (sunscreen and insect repellent)
  - Wear sunscreen with a sun protection factor (SPF) of at least 15
  - Wear insect repellent to protect against potentially harmful insects such as mosquitos and ticks. Repellants containing DEET have been proven to provide more effective protection

## **Selecting Body Protection**

It's important to select the type of body protection that will protect you from hazards in your workplace.

- **Paper-like fiber** is often used to make disposable suits that provide skin protection against dust and splashes
- **Treated wool and cotton** clothing is used for protective clothing because it adapts well to changing workplace temperatures and is comfortable and fire-resistant
- Cotton duck protects against cuts and bruises when handling heavy, sharp or rough materials

- Leather protective clothing is often used against dry heat and flame
- **Rubber, rubberized fabric, neoprene and plastics** are all used to make clothing that protects against certain acids and other chemicals

### Wearing Body Protection

Whatever type of body protection you are required to wear in your job, you must know how to put it on (don) and take it off (doff) properly. You must receive hands-on training covering:

- How to don the protective clothing properly
- How to adjust for a comfortable and effective fit
  - Body protection should fit the person, be comfortable and allow for movement
- The limitations of the body protection you will wear
- How to doff, store and dispose of PPE

### Heat Load

Wearing PPE and certain clothing can increase your risk of heat-related illnesses. To help prevent heat stress and other heat-related illnesses when wearing PPE, your employer should consider the:

- Type of PPE (for example, wearing heat-resistant clothing when working with high-temperature hazards)
- Length of time an individual can wear the PPE
- Individual worker's actual work rate, fitness level, hydration level and acclimatization
- Environmental conditions
- Access to cooling vests, which can help prevent heat stress
- Implementation of work-rest cycles when above 26.6 °C (80 °F)

#### Inspection

Before you wear any kind of body protection, check it for signs of damage such as rips, tears, stains, scuffs or loss of elasticity. Check for overall fit, seals, gaps and range of motion with other PPE. If the body protection is damaged or fails inspection, do not use it, remove it from service and notify your supervisor.

Always follow manufacturer guidance and instructions when inspecting your PPE. If your PPE has a date of manufacture and service life, make sure that you are within the specified lifespan of the PPE.

#### Take Care of Your PPE

#### Contaminants

Always follow the manufacturer's guidance and instructions for cleaning, sanitizing and storage requirements. Many contaminants can be removed by rinsing or dissolving. Using surfactants, such as mild detergents, makes contaminants dissolve more readily and reduces their ability to stick to impermeable surfaces.

You can also remove contaminants by scraping, brushing or wiping the equipment. A lowpressure filtered vacuum is an acceptable option compared to compressed air, which can result in skin, eye and respiratory issues.

Contaminants can be removed through evaporation, then rinsing, and through chemical disinfection or neutralization. Shared PPE, such as a corrosive apron, must be cleaned and/or disinfected between users.

#### Materials

The cleaning method you use will depend on the type of PPE and the material it is made of.

PPE Material	Cleaning Method
Protective suits and chemical-resistant clothing	Use mild soap and water or dispose of them as hazardous waste if grossly contaminated or permeated with contaminants.
Coveralls and long underwear	Launder at industrial laundry facilities, notifying them of potential contaminants. If laundering on-site or at home, if allowed, contain the item and wash separately from other garments and personal clothing.
High-visibility safety apparel	Follow the manufacturer's instructions on the label.
PPE made of leather	Do not wash directly with water. Apply a small amount of moisturizing bath soap and water to a dry cloth, rub the PPE clean, and wipe off soaped areas with a damp clean cloth.
PPE made of rubber	Can be soaked in soapy water and scrubbed with a soft brush, depending on the contaminant, and rinsed with clean water.

#### Storage

Each manufacturer of PPE provides care, use and storage requirements but, as a general rule, your PPE should be kept:

- Clean
- Dry, preferably sealed in its original packaging or another sealed bag
- Free from compression by heavy objects
- Secure from theft or tampering
- Away from environmental factors, extreme temperatures and sunlight

Disposable protective suits must be disposed of after each use. If contaminated, you must dispose of it as hazardous waste.