PPE Hazard Assessment and Selection Guide for Non-Research Activity

UMBC

Intended for reference by Non-Research and Non-Laboratory Faculty and Staff, including administrative and support staff, professional services, trades, and shops.

For Laboratory and Research Faculty and Staff, refer to the UMBC Laboratory Safety Guide

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Section I: Conducting a PPE Hazard Assessment

When other, more effective means of controlling a workplace hazard are not feasible or do not provide sufficient protection, personal protective equipment (PPE) must be provided. Departments are responsible for assessing the workplace to identify hazards requiring the use of PPE, ensuring the adequacy of the PPE and ensuring that PPE is properly worn and maintained.

Supervisors should utilize this form to complete and document the PPE assessment and selection process for the associated job, task, or activity. This should be completed in collaboration and consultation with employees.

Supervisor Name:	**Department/Area/Office:**
Supervisor Contact Phone and Email:	**Location:**
Job, Activity, or Work Being Assessed:	
Names of Other Participants:	**Date Completed:**

Part A: Physical Hazards

Minimum PPE Required: Safety Glasses, Long Sleeves with Tight Fitting Cuffs (no loose clothing), Long pants or equivalent leg coverings. Gloves are required whenever there is a hazard of injury to the hands (such as pinching or crushing). Safety/steel toe footwear is required when there is a risk of objects being dropped on the feet. Hard hats are required whenever there is a risk of objects striking or falling onto the head.

Check this box if task applies	Task Description	Potential Hazards	PPE Required	Notes
	Operating rotating equipment or machinery	Striking/blunt force injury, crushing, pinching, caught-in/between moving parts	• Minimum PPE (see notes)	Restrain/tie-back hair, no jewelry or loose clothing Short sleeves are permitted for this task. Long sleeves are permitted as long as they are tight fitting in the cuff and sleeve and not loose, otherwise they must be rolled back or removed. Do not wear gloves when operating machinery where there is a risk of snagging or entanglement.

	Using saws or cutting equipment	Cuts, lacerations, amputations	• Minimum PPE	Restrain/tie-back hair, no jewelry or loose clothing
	Working with compressed gas cylinders	Asphyxiation, toxic gas or fume exposure, physical hazards from cylinder itself (crushing, explosion, etc)	• Minimum PPE	Use appropriate gas cylinder handling, storage, and use methods Ensure adequate ventilation

	Maintaining, servicing or repairing electrically powered or other types of energized equipment	Electric shock, arc flash, burns (for electrically energized equipment) Other hazards include crushing, caught-in/between, cutting, amputation, striking/blunt force from moving or rotating parts	• Minimum PPE • For electrically energized equipment - refer to UMBC Electrical Safety Written Plan for PPE selection guidelines	Implement appropriate Lockout Tagout measures when servicing energized equipment (refer to UMBC Lockout Tagout Program)
	Working with hand tools	Crushing, pinching, cutting, laceration, amputation	• Minimum PPE • Gloves	

	Welding or hot work, such as arc welding, cutting, brazing, torch welding, hot work with oxygen or acetylene	Conjunctivitis Corneal damage Skin burns Flash burns Hearing/ear damage Welding fume fever Electric shock	• Minimum PPE • Welders hood, UV face shield and/or goggles with proper shades • Leather safety toed shoes • Head cover • Ear plugs or ear muffs	
	Working with loud or noisy equipment or machinery	Exposure to hazardous noise levels that may lead to hearing or ear damage	• Minimum PPE • Hearing Protection	Contact ESH for assistance with assessing noise level if the noise is perceived as reaching or exceeding harmful levels

Part B: Chemical Hazards

Minimum PPE Required: Safety glasses, (safety goggles if there is a potential for splashing), chemical resistant gloves that are appropriate for the chemical (refer to the chemical's Safety Data Sheet), Long pants, long sleeve shirt, or coverall (no loose clothing).

Check this box if task applies	Task Description	Potential Hazards	PPE Required	Notes
	Working with degreasers, corrosives, or other toxic liquids	Fume or vapor inhalation, skin or eye damage, absorption (toxicity)	● Minimum PPE ● Eyes/Face - Use safety goggles or a face shield with safety glasses underneath, if there is splashing potential ● Inhalation hazard - Respirator if adequate ventilation cannot be achieved	Refer to UMBC Respiratory Protection Program for more information on respirator use. Contact ESH for assistance with assessing the workplace for respiratory hazards to determine appropriate control measures.

	Working with machine oils, grease, coolants, other fluids	Fume or vapor inhalation, skin or eye damage, absorption (toxicity)	• Minimum PPE • Eyes/Face - Use safety goggles or a face shield with safety glasses underneath, if there is splashing potential • Inhalation hazard - Respirator if adequate ventilation cannot be achieved	See above for respiratory protection information. Cutting fluids can sometimes harbor microorganism growth and can become contaminated with metals and other harmful substances.
	Cleaning up spills	Fume or vapor inhalation, skin or eye damage, absorption (toxicity)	• Minimum PPE • Eyes/Face - Use safety goggles or a face shield with safety glasses underneath, if there is splashing potential • Shoe covers as needed • Chemical resistant clothing, coverall, or apron • Inhalation hazard - Respirator if adequate ventilation cannot be achieved	For small spills only. For large spills, or if you are not comfortable or are unsure how to handle a spill, contact ESH at 5-2918. Contact Campus Police at 55555 for any emergencies such as an uncontrolled hazardous material release, for fires, or if the spill creates any other medical emergency.

	Use this space to list any other particularly hazardous task involving a chemical.	Conduct a risk assessment or job hazard analysis. List hazards based on findings. Consult Safety Data Sheets.	• Minimum PPE • Chemically resistant clothing, coverall, or apron as needed • Inhalation hazard - Respirator if adequate ventilation cannot be achieved	Perform any work involving chemicals with effective and adequate ventilation, to include localized ventilation where appropriate (such as a fume hood or localized fume extraction system -i.e., a snorkel or similar)

Part C: Additional PPE Selection Guidance

PPE should be selected based primarily on the hazards identified during the assessment. Departments should also take the comfort and proper fit of PPE into consideration when selecting appropriate items for each employee. PPE that fits well and is comfortable to wear will encourage employee use of PPE. Most protective devices are available in multiple sizes and care should be taken to select the proper size for each employee.

1. PPE Inspection, Maintenance, and Decontamination. All PPE should be inspected prior to, during and after use. Clean, care for, and store PPE in accordance with manufacturer's instructions. Discard PPE that is not working properly or is heavily soiled, or if it is not designed to be reused (such as disposable gloves).

2. Footwear. Special footwear can provide protection against physical and chemical hazards. They are designed to cover the entire foot from the toes to the ankle. Wear shoes that will protect against the hazards you are likely to encounter. When there are physical or chemical hazards, avoid sandals, flip flops, flats, athletic shoes and canvas/breathable fabric tops. Always follow any specific footwear requirements set by your department's uniform, dress code, or footwear policies.

3. Hearing Protection. Ear plugs or muffs provide protection against hazardous noise levels. When there is a concern or potential for hazardous noise levels, contact ESH for a noise exposure assessment.

4. Airborne/Inhalation Hazard, Engineering Controls, and Respiratory Protection. When materials have a potential for becoming airborne, use a chemical fume hood, local exhaust (snorkel) or other engineering control whenever possible. Activities that generate airborne contaminants or odors that are not conducted using local exhaust or some other engineering control (such as at the workbench) should be evaluated to determine if the activity presents an inhalation hazard.

- If respiratory protection is identified as a necessary control during the hazard assessment, users must be enrolled in the UMBC Respiratory Protection Program. ESH will assist with assessing for the need for respiratory protection and assist with facilitating employee enrollment in the Program. Contact ESH for more information at esh@umbc.edu or 5-2918.

6. Chemical-Resistant Gloves. Chemical-resistant gloves must be selected based on the specific chemical(s) used and the glove manufacturer's permeation and compatibility charts.

2. PPE Training Acknowledgement

PPE training must be conducted by the shop safety coordinator or their designee. Training will identify and discuss potentially hazardous tasks performed in the shop, and selection and use of shop specific PPE to protect the shop worker or researcher***. The training content, instructor and attendees must be documented***. To provide adequate training, the shop safety coordinator or their designee will provide the following:

The shop safety coordinator or their designee will review the completed Shop PPE Hazard Assessment Guide with the employee. It describes the operations in the shop where employees need PPE for protection against exposure to hazards. In this step, the hazard assessment is used as a training tool. While discussing shop operations and the associated hazards with shop staff, the shop safety coordinator will address the following:

Training Steps:

1. The Supervisor or designated person will review the completed PPE Hazard Assessment with the employee(s) and discuss the PPE in relation to the job, task, or activity being assessed.
2. Discuss the following items:
    a. How to obtain PPE
    b. What types of PPE are used
    c. Where and how the PPE is stored, cared for, and maintained
    d. How to put on, appropriately wear, and take off PPE, including adjusting for proper fit
    e. How to properly use the PPE
    f. General PPE safety practices, including PPE inspection and reporting improperly functioning PPE
3. Ensure each employee sign the training acknowledgement
4. Provide refresher training anytime the hazard assessment is updated or if new PPE is introduced.

PPE Training Acknowledgement Form

Supervisor Name:	**Department/Area/Office:**
Location:	**Date:**
Job/Task/Activity:	

Employees: By signing this form, I agree that I have reviewed and understand the PPE requirements for the job/task/activity described above.

Name of Employee	Signature	Date

Managers: Retain this form for at least three (3) years.

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