Glove Selection

EHSS-Phos Program – Personal Protective Equipment (PPE), Appendix E

1. **PURPOSE / OBJECTIVE:** To establish guidelines for the selection of gloves to further minimize the risk of injury to the hands.

2. ROLES AND RESPONSIBILITIES

2.1. The following table outlines the responsibilities for specific groups / roles as required for the Personal Protective Equipment (PPE) Program:

Group / Role	Responsibilities
Supervisors	• Lead by example - Model good work practices by consistently and properly wearing the right gloves for the job. • Participate in educating and training workers about the hazards in the workplace, how gloves protect the worker, how to wear them correctly, when they must be worn, how to maintain, store, and dispose of them properly. • Check that gloves are available and that workers know where and how to obtain them. • Regularly monitor that workers are wearing their gloves in accordance with this program. • Ensure that gloves are being inspected, stored, and disposed of properly. • Act to remedy situations where workers are not wearing gloves or when workers report that gloves are requiring replacement. • Refer any issues with gloves to your manager or safety professional and stay involved to make sure issues are resolved.
Workers	• Make sure you are educated and trained in how and when to wear your gloves and how to clean, inspect, store and dispose of them. • Wear the appropriate gloves for the task and notate any changes as necessary on risk assessment. • Take care of your gloves – inspect regularly for wear and tear and other damage and replace when necessary, but avoid disposing of gloves that are in good condition.
Contractors	• Check that workers are provided gloves that meet the requirements of the glove selection program.

3. HAZARD RECOGNITION

3.1. Workers shall recognize the potential causes of hand and finger injuries.

3.1.1. Striking against or struck by an object. (Wrench slips off a nut, improper use of tools).

3.1.2. Caught in, on or between an object. (Handling heavy objects, pinch points).

3.1.3. Contact with chemicals, electrical current or extreme temperatures. (Lab environment, sample collection)

3.1.4. Abraded or punctured by an object. (Contact with a moving belt, lumber with a nail protruding)

3.1.5. Reaching into "blind spots" (Engine compartments, containers of material)

3.2. Inspect the job for hazards - Look for existing and unexpected hazards that may affect your hands or fingers.

3.2.1. Mechanical

3.2.2. Temperature Extremes (heat and cold)

3.2.3. Chemical Hazards

3.2.4. Abrasions (loss of skin)

3.2.5. Lacerations (cuts)

3.2.6. Puncture Wounds

3.2.7. Blood Borne Pathogen Hazards

3.3. Hand and Finger Safety

3.3.1. Plan the work activity, identify hazards, and choose methods that minimize risk to hands and fingers.

3.3.2. Wear the correct type of hand protection based on identified hazards.

3.3.3. Continually watch for potential pinch points and other changing job conditions.

3.3.4. Only operate equipment with guards and other controls in place.

3.3.5. Lacerations can occur easily if knives and sharp tools are used incorrectly. Remember, always cut away from your body.

3.3.6. Never attempt to clean or adjust a moving piece of equipment. Follow lockout procedures.

3.3.7. Never reach into a "blind spot."

3.3.8. Avoid putting your unprotected hands into unknown materials or chemicals.

3.3.9. Remove your gloves if there is a possibility of entanglement, such as when operating a lathe or similar tool.

3.3.10. Always inspect your gloves for damage before using.

3.3.11. Always use the proper tool correctly for the job.

3.4. Glove Selection

3.4.1. Workers will consult standard operating procedures, job hazard analysis, task safety analysis or any other relevant documents that provide information on the appropriate glove to wear for the task/tasks being performed. More than one type of glove may be required to complete the task/tasks.

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Figure 1 Glove Selection Guide

Hazard	Source	Task / Trade Examples	Glove Type	Key Features
Mechanical	Chains, gears, rollers, wheels, spiked or jagged tools, edges that can catch and tear, shearing, chopping, and crushing, cutting tools such as knives, falling objects, etc.	Rigging and slinging. Material handling. Scaffolding. Pipefitting. Mechanical maintenance. Carpentry. When handling wire, wire rope, rope, pry bars, railroad bars, rough-edged or sharp-edged objects.	Cut Resistant[1] (e.g. Nitrile or Polyurethane dipped knit)	Different levels of cut, puncture, and abrasion resistance.
			Leather	Some cut, puncture, and abrasion resistance. Absorbs some impact. Shields against sparks. Some thermal resistance.
			Mechanics	Different levels of cut, puncture, and abrasion resistance. Impact protection. Thermal protection. Different levels of oil resistance.
Temperature Extremes (heat and cold) ***Note:*** When the temperature of the hand or finger drops below 15° C or 59° F they become insensitive and the probability of an injury increases.	Sparks, steam, hot or cold pipes and surfaces, compressed gases, production process, or the environment. Hot work.	Welding, cutting, burning activities.	Non-combustible Welding Gloves (e.g. leather gauntlet)	Excellent protection against heat. Excellent cut, abrasion, and puncture resistance.
Chemical	Degreasers, metal dyes, and inks, plant and animal oils, cleaning solutions, process	Handling chemicals, corrosives, or petroleum products.	Natural (Latex) Rubber[2]	Comfortable to wear general purpose glove. Outstanding tensile strength, elasticity, and temperature resistance.

	chemicals, fuels, acids, corrosives, etc.	Line breaks (all types - single block valve, double block valve).		May cause allergic reactions in some individuals. Provides Very Good to Good Protection for: Acetic Acid, Acetone, Hydrofluoric acid (48%), Ketones, Methyl ethyl ketone, Phosphoric acid, Sulfuric Acid
			Neoprene[2]	Made of synthetic rubber and offer good pliability, finger dexterity, high density, and tear resistance. Alternative to latex gloves. Provides Very Good to Good Protection for: Acetic Acid, Acetone, Hydrofluoric acid (48%), Ketones, Lacquer thinners, Methyl ethyl ketone, Nitric acid, Phosphoric acid, Sulfuric Acid
			Nitrile[2]	Offers excellent dexterity and grip. Provides Very Good to Good Protection for:

				Acetic Acid, Acetone, Hydrofluoric acid (48%), Phosphoric acid, Sulfuric Acid
			Synthetic (Buty) Rubber[2]	Resist oxidation, ozone corrosion and abrasion, and remain flexible at low temperatures. Provides Very Good to Good Protection for: Acetic Acid, Acetone, Diisobutyl ketone, Hydrofluoric acid (48%), Ketones, Methyl ethyl ketone, Methyl isobutyl ketone, Phosphoric acid, Sulfuric Acid
Abrasions (loss of skin), Lacerations (cut), Puncture wounds	Abrasions occur when skin is rubbed away by friction of belts, sanders, grinders and rough materials. Lacerations happen when contacting dull or sharp cutting tools, objects or materials with jagged edges. Puncture wounds are caused when pointed objects pierce	Handling flat metal screen material or other excessively sharp objects or materials. Use of varied hand cutting tools. Refer to the Hand Cutting Safety Program for specifics.	Cut Resistant (e.g. Nitrile or Polyurethane dipped knit)	Level 5 cut, puncture, and abrasion resistance recommended.

	the skin and deeper tissues. (glass ,nails, sharp objects)			
Crushing / Pressure	When an elevated risk of hands or fingers being pinched or caught between objects.	When the potential for stored energy exists. Hammering, pry bars, carrying and placing heavy loads, etc.	Impact resistant (e.g. mechanics glove with impact resistance)	Equipped with an impact exoskeleton, it protects the back of the hand against crushing and pressure injuries.
Electrical	**See NA Electrical Program**			
Blood Borne Pathogen ***Note:*** Always have hand or finger injuries cleaned and treated immediately.	Hands may be exposed to contaminated materials that may cause infection.	Medical / first aid tasks	Latex (or latex alternative)	Protection against blood borne pathogens. Protection against common medical chemicals.

1. Minimum recommended cut level 5.
2. Not all inclusive list of chemicals, refer to the task specific hazard analysis for approved glove types.