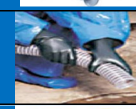
The Facts

Hand Protection

The workplace creates many hazards for your hands, including chemicals, biological materials, and physical hazards. This fact sheet provides general guidance for selecting and using appropriate gloves to protect you from the risk of hand injury.

It is recommended to use glove compatibility charts by the manufacturer before using gloves.

Glove Reference Chart

Glove Material	Advantages and Disadvantages	Example Photos
Nitrile	Excellent general use glove; Good for solvents, oils, greases, and some acids and bases; Clear indication of tears and breaks; Thicker nitrile gloves (6mil, 8mil) provide longer permeation timeframe when working with chemicals. Safe for both incidental and extended contact depending on the glove thickness. Good alternative for those with latex allergies.	
Butyl rubber	Good for ketones, esters and acetone. Butyl rubber gloves offer good chemical protection against a wide variety of chemicals. Poor for gasoline and aliphatic, aromatic, and halogenated hydrocarbons.	
Neoprene	Good for acids, bases, alcohols, fuels, peroxides, hydrocarbons, and phenols; Good for most chemicals. Poor for halogenated and aromatic hydrocarbons.	
Silver Shield	Good for most hazardous chemicals. Poor fit (Note: Dexterity can be partially regained by using a heavier weight Nitrile glove over the Silver Shield glove/ Norfoil).	
Viton	Good for chlorinated and aromatic solvents; Good resistance to cuts and abrasions. Poor for ketones; Expensive.	
Polyvinyl chloride (PVC)	Good for acids, bases, oils, fats, peroxides, and amines; Good resistance to abrasions. Poor for most organic solvents.	
Polyvinyl alcohol (PVA)	Good for aromatic and chlorinated solvents. Poor for water-based solutions.	
Stainless steel **Kevlar** **Leather**	Cut-resistant gloves; Sleeves are also available to provide protection to wrists and forearms. Stainless steel gloves are good for cut protection. They are hygienic and easily sanitized with hot water and soap; Kevlar gloves are cut- and abrasion-resistant, provide protection against both heat and cold; Leather gloves resist sparks and moderate heat, good for welding job.	 
Cryogenic Resistant Material	For use with cryogenic materials designed to prevent frostbite. Suitable for applications handling liquid nitrogen and other cryogenic gases to protect from cold contact and prevent burns from liquid gas leakage; Elbow length gloves provide excellent dexterity and thermal protection for hands and mid-arms.	
Nomex	For use with pyrophoric materials, consider wearing a flame-resistant glove such as Nomex "flight" glove with a thin nitrile exam glove underneath.	

Safe Glove practices

1. Select the correct glove type and proper thickness for the hazards, the right size and dexterity for your hands and arms. Inspect and test gloves for defects before using.
2. Consider double gloving for some procedures.
3. Remove gloves carefully to avoid contact with the outside of the glove. Always wash your hands after removing gloves.
4. Gloves used for P – list chemicals must be collected and disposed of as a hazardous waste through Hazardous Waste Management; Gloves used for other chemicals can be discarded in a regular trash can; Gloves contacted with infectious materials should be disposed into a biohazardous waste container.
5. Latex gloves are not recommended due to the risk of an allergic reaction. Contact Occupational and Environmental Safety (OES) for assistance in determining glove type.

For more information see Clemson OES Webpage

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