Choosing the right glove:
Chemicals and hazardous products often require the use of protective gloves. Different glove materials are effective for protection against different chemical agents. The wrong glove could put the user in contact with a vapor or liquid that causes injury or illness. The selection of chemical-resistant hand protection must be done properly to ensure that employees are adequately protected.

The hazard assessment:
The first step in choosing the right glove is conducting a hazard assessment of the task. Determine:

- The chemicals being used.
- The properties for each chemical, including:
  - Concentration.
  - Temperature.
  - Toxicity.
- The conditions for chemical use, including:
  - The frequency of exposure.
  - The duration of exposure.
  - Whether protection is needed against full immersion, splash protection or incidental contact.
- How much grip and manual dexterity is needed for the task.
- Whether puncture and cut resistance is needed for the task.

Thicker glove material increases chemical and cut resistance, but can reduce grip and dexterity. Ideally, gloves should be selected to provide adequate chemical protection without unnecessarily sacrificing other safety considerations.

Glove resistance:
Once you know the conditions your glove must withstand, consult manufacturer glove charts to identify the glove with the level of chemical resistance you need. Resistance for a specific chemical varies from manufacturer to manufacturer.

Resistance can be measured with:

- **Breakthrough time:** The time in minutes between initial chemical contact on the outside of the glove and the analytical detection of vapor on the inside.
- **Permeation rate:** The rate at which chemicals pass through the material once breakthrough occurs, usually reported as micrograms per square meter per minute.
- **Degradation:** An adverse change in physical properties, such as weakening of the material or excessive swelling.
Training:
Train employees on your personal protective equipment program, making sure to cover inspection, proper use and how frequently the gloves need to be replaced.

Gloves must be checked prior to use:
- Visually inspect gloves for:
  - Holes or other signs of wear. Note whether the gloves were worn previously.
  - Discoloration or stiffness that could result from manufacturing flaws.
  - Signs of improper storage.
- Test the gloves for leakage: A simple test for leaks is to roll the open end of the glove to trap air inside, then to squeeze to increase air pressure and check for leaks.
- Do not use gloves that show signs of obvious wear or leakage.

Proper glove use:
- When putting on the gloves, it is a good practice to turn the cuff of the glove up. This can prevent chemicals from running down the glove from the hand and contacting the arm.
- Remove gloves properly to prevent exposure to hazardous materials by one of two methods:
  - Wash the gloved hands before removing.
  - Remove the glove from the first hand with the other gloved hand, then grab the inside of the other glove and peel it off, inside-out, over the first glove.
- Safely dispose of the gloves after use.
- Replace the gloves as needed.

Common glove types:
- **Rubber gloves** may include:
  - Natural rubber
  - Latex
  - Nitrile
  - Butyl
  - Neoprene
- Available **polymeric materials** include:
  - Polyvinyl chloride (PVC)
  - Polyvinyl alcohol (PVA)
  - Polyethylene
This form documents that the training specified above was presented to the listed participants. By signing below, each participant acknowledges receiving this training.

Organization:__________________________________________________________

Trainer:_________________________ Trainer’s Signature:____________________

Class Participants:

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Remember to load your completed trainings into the Risk Management Center.