

SAFETY NOTICE

Occupational Health & Safety



SUBJECT: GLOVE SELECTION FOR CHEMICAL USAGE

A recent fatality which occurred in a university research laboratory in the United States involving dimethyl mercury has been attributed to the protective gloves being worn. This unfortunate accident serves to highlight the importance of selecting the proper protective glove for the task and material. Below are recommendations to help in the selection of the correct glove.

When selecting gloves for chemical usage there are a number of criteria which need to be considered.

1. Select a glove which is resistant to the chemical being used. Refer to the material safety data sheet for the majority of materials. Contact the glove manufacturer for a specific recommendation when dealing with extremely toxic or corrosive materials. Gloves must be selected for both low permeation by the chemical and resistance to chemical degradation. Permeation refers to the capacity of a given chemical to pass through the glove material at the molecular level. Degradation is the actual chemical breakdown of the glove material.

There are over thirty types of polymers used to manufacture chemical resistant gloves. Make sure you select the proper material. Not only are different polymers used but there is variability of polymer composition from manufacturer to manufacturer, so contact the manufacturer of the gloves you plan to use and get their specific recommendation.

2. Ensure the glove selected is the right size to fit the user. Gloves which are the correct size are more likely to be worn and will allow the user greater dexterity.
3. Always check gloves for holes prior to putting them on. Even new gloves may have a hole. Check for holes by trapping air in the glove and seeing if it leaks out.

Sometimes the ideal glove is actually two gloves worn together. Wearing one pair of gloves over another combines the advantages of both. This is particularly effective when the inner glove is a flexible laminate glove (laminates are produced by bonding two materials together). Laminates greatly reduce permeation but don't eliminate it. When a laminate is chosen use the smallest size possible, this allows for the best dexterity.

Reusable gloves should be rinsed after use and allowed to air dry. Replace reusable gloves whenever they show signs of damage or become discoloured. If you suspect that reusable gloves have become contaminated - replace them immediately.

Disposable latex and PVC gloves have an important practical role in the lab. Disposable gloves provide barrier protection when working with biological materials, radioisotopes and helping to prevent the contamination of glassware. For routine tasks involving non-hazardous chemicals, disposable gloves allow dexterity, convenience and low cost. Never reuse disposable gloves. Disposable gloves are not suitable for use with hazardous or aggressive chemicals.

The Disposable Nitrile gloves provide increased chemical resistance in a disposable glove. They also have better tear and puncture resistance than disposable latex or PVC gloves. They are hypoallergenic and provide an alternative to latex sensitive individuals. These are not a replacement for heavy duty reusable gloves.

If you have any questions about gloves or need assistance in selecting the best glove for your application contact Allan Hood at 84741.

Updated March 5, 2002.