Glove Choice for Chemical Protection

Mindfulness Minute: Incorporate safety into your workflow making sure you are using the right protection for the hazard.

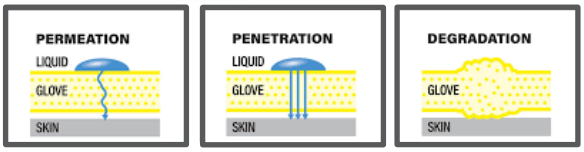
*Appropriate gloves should ideally be worn whenever any hazardous chemicals are manipulated by hand. They **must** be worn whenever there is the possibility of hand contact with any chemical that is corrosive, toxic, a sensitizer, or a carcinogen.*

No glove material will protect you from all chemicals. Choose the right glove for the hazardous chemical.

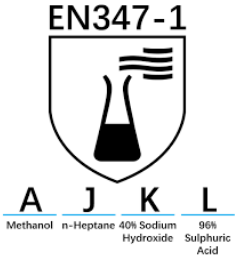
Material	Intended Use/ Restriction	Material	Intended Use/ Restriction
Nitrile  Disposable	YES Disposable for incidental contact ONLY.	Nitrile  Reusable	YES See manufacturers' notes on testing data and chemical resistance.
	NO Change immediately if contaminated. Low protection after chemical contact or prolonged use.		NO Must be rinsed and dried after each use. Limited dexterity.
 Butyl Rubber	YES Good for most aggressive chemicals: aldehydes, esters, concentrated mineral acids.	 Neoprene	YES Good for most hazardous chemicals: acids, bases, alcohols, fuels, & phenols.
	NO No protection from aromatic, aliphatic, or halogenated hydrocarbons		NO Poor for Halogenated & aromatic hydrocarbons
Silver Shield/ Norfoil 	YES Good for most hazardous chemicals.	 Viton	YES Good for chlorinated & aromatic solvents. Good cut and abrasion resistance.
	NO Poor fit. Dexterity is improved by wearing heavier weight nitrile gloves over these.		NO Poor for ketones.
Polyvinyl chloride (PVC) 	YES Good for acids, bases, oils, fats, peroxides, & amines. Good resistance to abrasion.	Polyvinyl alcohol (PVA) 	YES Good for aromatic & chlorinated solvents, aqueous/soap solutions, acids, & bases.
	NO Degraded by most organic solvents.		NO Moisture will degrade gloves quickly.

Decoding the Pictograms

Manufacturers that claim chemical or biological protection of their gloves are held to strict standards and testing requirements under ANSI/ISEA and EN/ISO.



Gloves are tested for permeation, degradation, and penetration times against a list of 18 chemicals. Each chemical has a letter designation that represents the general chemical class. If a glove offers protection, the pictogram (right) and the designated letter for each successfully tested chemical is printed on the box.



There are 3 levels of chemical protection based on breakthrough time of a set number of chemicals from the list. Type A offers the highest protection, and Type C offers the lowest protection.

Type of glove	Marking	Requirement
Type A	EN374-1/Type A  UVWXYZ	Breakthrough time > 30 min for at least 6 chemicals in the new list
Type B	EN374-1/Type B  UVW	Breakthrough time > 30 min for at least 3 chemicals in the new list
Type C	EN374-1/Type C 	Breakthrough time > 10 min for at least 1 chemical in the new list

EN ISO 374-5	For gloves offering protection against bacteria and fungi.
EN ISO 374-5  VIRUS	For gloves protecting against bacteria, fungi and viruses.

Only if the above pictograms appear on the box does the glove offer protection from biological hazards.