



### SAFETY INFOGRAM

- **CHOOSE** a material and style of glove that adequately protects hands from the hazard.
- **REVIEW** the following sources to determine the material's ability to protect hands against the hazard.
  - MSDS/Label Chemical Manufacturer.
  - Manufacturer of gloves (review recent permeability information)
  - CCOHS Data Bases/Inquiries Service
- **INSPECT** and test gloves for defects before using.
- **FOLLOW** manufacturer's instructions for care and maintenance

**ENSURE** gloves fit properly.

**WASH** off all chemical-protective gloves with water before removing them.

**EVALUATE** material resistance under conditions of use. Resistance of specific materials can vary from product to product.

**MAINTAIN** gloves carefully.

Refer to SAFETY INFOGRAM K10 for general information on hand protection.

| *CHEMICAL PERMEATION OF GLOVE MATERIAL Breakthrough time in hours is calculated as an average |              |          |     |                |         |       |               |                      |              |          |     |                |         |       |               |
|---|--------------|----------|-----|----------------|---------|-------|---------------|----------------------|--------------|----------|-----|----------------|---------|-------|---------------|
| Pure Chemical   | Butyl Rubber | Neoprene | pVC | Natural rubber | Nitrile | Viton | Ploy-ethylene | Pure Chemical        | Butyl Rubber | Neoprene | pVC | Natural rubber | Nitrile | Viton | Ploy-ethylene |
| PCB   | >8           | >8       | <1  | <1             | <1      | >8    | >1            | Ammonium hydroxide   | >4           | >2       | >2  | >4             | >4      | >8    | >1            |
| Sulphuric acid >70%   | >1           | <1       | <1  | <1             | <1      | <1    | <1            | Xylene               | <1           | <1       | <1  | <1             | <1      | >8    | >1            |
| Hydrochloric acid   | >8           | >4       | >2  | >2             | >4      | >1    | <1            | Toluene diisocyanate | >8           | >4       | >2  | >4             | >4      | >8    | >1            |
| Sodium Hydroxide <70%   | >8           | >4       | >4  | >2             | >4      | >4    | >8            | Trichloroethane      | >4           | <1       | <1  | <1             | >8      | >8    | <1            |
| Nitric Acid   | >4           | >4       | >4  | >4             | >4      | >4    | <1            | Formaldehyde         | >8           | >2       | <1  | <1             | >8      | >8    | >4            |
| Ethylene glycol   | >2           | >1       | >2  | >2             | >2      | >2    | >2            | Perchloroethylene    | <1           | <1       | <1  | <1             | >4      | >8    | <1            |
| Vinyl chloride  | >4           | >4       | >4  | >4             | >4      | >4    | >4            | Phenol >70%          | >8           | >4       | <1  | <1             | <1      | >8    | >4            |
| Pentachlorophenol   | >4           | >1       | >2  | >4             | >4      | >4    | >4            | Acetic acid          | >4           | >2       | >2  | >4             | >4      | >1    | >4            |
| Methanol  | >8           | <1       | <1  | <1             | <1      | >1    | >8            | Chromic acid         | >1           | >4       | >1  | >4             | >4      | >4    | >4            |
| Phosphoric Acid >70%  | >4           | >4       | >4  | >4             | >4      | >4    | >4            | Hydrogen peroxide    | >1           | >4       | >4  | >4             | >4      | >4    | >4            |

<1 (0-0.9)    >1 (1-1.9)    >2 (1-1.9) ½ shift    >4 (4-7.9) ½ shift    >8 (>8) full shift

| *GLOVE MATERIAL RATINGS                         |                     |                |             |                 |                  |                     |                 |
|---|---------------------|----------------|-------------|-----------------|------------------|---------------------|-----------------|
| Material (Designation in Matrices)              | Abrasion Resistance | Cut Resistance | Flexibility | Heat Resistance | Ozone Resistance | Puncture Resistance | Tear Resistance |
| Butyl Rubber (Butyl)                            | F                   | G              | G           | X               | X                | G                   | G               |
| Chlorinated Polyethylene (CPE)                  | X                   | G              | G           | G               | X                | G                   | G               |
| Natural Rubber                                  | X                   | X              | X           | F               | P                | X                   | X               |
| Nitrile-Butadiene Rubber (NBR)                  | X                   | X              | X           | G               | F                | X                   | G               |
| Neoprene  | X                   | X              | G           | G               | X                | G                   | G               |
| Nitrile Rubber (Nitrile)                        | X                   | X              | X           | G               | F                | X                   | G               |
| Nitrile Rubber/Polyvinyl Chloride (Nitrile/PVC) | G                   | G              | G           | F               | X                | G                   | G               |
| Polyethylene                                    | F                   | F              | G           | F               | F                | P                   | F               |
| Polyurethane                                    | X                   | G              | X           | G               | G                | G                   | G               |
| Polyvinyl Alcohol (PVA)                         | F                   | F              | P           | G               | X                | F                   | G               |
| Polyvinyl Chloride (PVC)                        | G                   | P              | F           | P               | X                | G                   | G               |
| Styrene-butadiene Rubber (SBR)                  | X                   | G              | G           | G               | F                | F                   | F               |
| Viton   | G                   | G              | G           | G               | X                | G                   | G               |

**X – Excellent    G – Good    F – Fair    P – Not Recommended**

Ratings are subject to variation depending upon formulation thickness, and whether the material is supported by fabric.