# Chemical Handling Glove Guide

A guide to help you choose the right glove from Ansell's extensive range of specialist gloves designed to ensure optimal protection without compromising productivity.

Ansell

The world leader in hand protection

# Reusable chemical gloves – permeation breakthrough times in minutes

| | Product | Barrier® | PVA™ | Sol-Vex® | | AlphaTec® | | Virtex® | Neotop™ | Scorpio® | Chemi-Pro™ | ChemTek™ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Product code | 2-100 | 15-554 | 37-185 | 37-175 | 58-530 58-535 | 58-270 | 79-700 | 29-500 | 8-354 | 224 | 38-612 | 38-514 |
| | Material | Laminated film | Polyvinyl alcohol | Nitrile | | Nitrile | | Nitrile | Neoprene | Neoprene | Neoprene / Natural rubber blend | Viton® / butyl | Butyl |
| **Chemical name** | **CAS†** | | | | | | | | | | | | |
| **1-Methoxy-2-Propanol** | 107-98-2 | > 480 | > 480 | 240 - 480 | 236 | 120 - 240 | 60 - 120 | 10 - 30 | 30 - 60 | 60 - 120 | 10 - 30 | > 480 | N/A |
| **1-Methoxy-2-propylacetate** | 108-65-6 | > 480 | > 480 | 120 - 240 | 132 | 120 - 240 | 60 - 120 | < 10 | 10 - 30 | 10 - 30 | < 10 | 120 - 240 | N/A |
| **Acetic acid, glacial** | 64-19-7 | > 480 | < 10 | 190 | 61 | 104 | 30 - 60 | 9 | 193 | > 480 | 129 | > 480 | > 480 |
| **Acetone** | 67-64-1 | > 480 | 37 | 10 - 30 | 7 | 6 | < 10 | < 5 | 17 | < 5 | 8 | 60 - 120 | 428 |
| **Acetonitrile** | 75-05-8 | > 480 | 145 | 20 | 11 | 13 | < 10 | < 5 | 34 | 28 | 14 | 60 - 120 | > 480 |
| **Acrylic acid** | 79-10-7 | > 480 | < 10 | 30 - 60 | 40 | 30 - 60 | 10 - 30 | < 5 | 64 | > 480 | 60 - 120 | > 480 | N/A |
| **Acrylonitrile** | 107-13-1 | > 480 | > 480 | < 10 | < 10 | 6 | < 10 | < 10 | 15 | 43 | 9 | > 480 | N/A |
| **Allyl alcohol** | 107-18-6 | > 480 | < 10 | 30 - 60 | 51 | 30 - 60 | 10 - 30 | 10 - 30 | 120 - 240 | 240 - 480 | 10 - 30 | 120 - 240 | N/A |
| **Ammonium Hydroxide, 25%** | 1336-21-6 | 27 | | > 480 (50%) | > 480 | 265 | 120 - 240 | 48 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Benzene** | 71-43-2 | > 480 | > 480 | 28 | 22 | 14 | < 10 | < 5 | 10 | < 5 | < 10 | 240 - 480 | 9 |
| **Benzoylchloride** | 98-88-4 | > 480 | > 480 | > 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | N/A | N/A |
| **Bromopropionic acid** | 590-92-1 | > 480 | < 10 | > 480* | > 480* | > 480* | > 480* | 120 - 240* | > 480 | > 480 | > 480 | > 480 | N/A |
| **Butyl acetate** | 123-86-4 | > 480 | > 480 | 60 - 120 | 47 | 49 | 10 - 30 | < 5 | 23 | 9 | 10 - 30 | < 10 | N/A |
| **Butyl alcohol** | 71-36-3 | > 480 | 60 - 120 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 120 | > 480 | N/A |
| **Carbon disulfide** | 75-15-0 | > 480 | > 480 | < 5 | 12 | 10 - 30 | < 10 | < 10 | < 5 | < 5 | < 5 | 120 - 240 | < 5 |
| **Carbon Tetrachloride** | 56-23-5 | 240 - 480 | > 480 | 240 - 480 | 240 - 480 | 240 - 480 | 120 - 240 | 10 - 30 | < 10 | < 10 | < 10 | > 480 | N/A |
| **Chloroform** | 67-66-3 | 32 | > 480 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | 120 - 240 | N/A |
| **Coal tar** | 8007-45-2 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 10 - 30 | 10 - 30 | < 10 | N/A | N/A |
| **Crude oil** | 68308-34-9 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 10 - 30 | 10 - 30 | < 10 | N/A | N/A |
| **Cyclohexanol** | 108-93-0 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 10 - 30 | > 480 | N/A |
| **Cyclohexanone** | 108-94-1 | > 480 | > 480 | 113 | 42 | 55 | 10 - 30 | 6 | 39 | 51 | 30 - 60 | 120 - 240 | N/A |
| **Dibutyl Phtalate** | 84-74-2 | 240 - 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 240 - 480 | 60 - 120 | 60 - 120 | 10 - 30 | > 480 | N/A |
| **Diesel fuel** | 68334-30-5 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 10 - 30 | 10 - 30 | < 10 | > 480 | N/A |
| **Diethylamine** | 109-89-7 | > 480 | 11 | 79 | 17 | 28 | 10 - 30 | < 5 | 9 | < 5 | < 5 | 10 - 30 | < 5 |
| **Dimethyl Sulfoxide** | 67-68-5 | > 480 | < 10 | 240 - 480 | > 120 | 120 - 240 | 60 - 120 | > 10 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Dimethylformamide** | 68-12-2 | > 480 | 13 | 43 | < 5 | 18 | < 10 | < 5 | 58 | 35 | 99 | > 480 | N/A |
| **Ethanol** | 64-17-5 | > 480 | < 10 | > 480 | 170 | 240 - 480 | 120 - 240 | 30 - 60 | 350 | > 480 | 20 | > 480 | N/A |
| **Ethyl acetate** | 141-78-6 | > 480 | > 480 | 29 | 18 | 15 | < 10 | < 5 | 10 | 16 | 9 | < 10 | 43 |
| **Ethylamine** | 75-04-7 | > 480 | 240 - 480 | 60 - 120 | 85 | 60 - 120 | 30 - 60 | 30 - 60 | 60 - 120 | 60 - 120 | 10 - 30 | N/A | N/A |
| **Ethylglycol acetate** | 111-15-9 | > 480 | > 480 | 129 | 60 - 120 | 60 - 120 | 30 - 60 | 10 - 30 | 31 | 30 - 60 | 21 | 60 - 120 | N/A |
| **Formaldehyde, 35%** | 50-00-0 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 |
| **Formic acid, 98-100%** | 64-18-6 | > 480 | < 10 | 30 - 60 | 22 | 30 - 60 | 10 - 30 | < 10 | > 480 | > 480 | 108 | < 10 | N/A |
| **Freon TF** | 76-13-1 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 60 - 120 | 10 - 30 | 240 - 480 | > 10 | N/A | N/A |
| **Gamma Butyrolactone** | 96-48-0 | > 480 | 120 - 240 | 10 - 30 | < 10 | < 10 | < 10 | < 10 | 120 - 240 | 120 - 240 | 240 - 480 | > 480 | N/A |
| **Gasoline** | 8006-61-9 | > 480 | > 480 | 240 - 480 | 134 | 120 - 240 | 60 - 120 | 60 - 120 | 10 - 30 | 30 - 60 | < 10 | > 480 | N/A |
| **Glutaraldehyde, 50%** | 111-30-8 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | < 10 | N/A |
| **Heptane** | 142-82-5 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 27 | 15 | < 10 | > 480 | 5 |
| **Hexamethyldisilazane** | 999-97-3 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 120 - 240 | 30 - 60 | 30 - 60 | 67 | > 480 | N/A |
| **Hexane** | 110-54-3 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 27 | 78 | < 5 | > 480 | N/A |
| **Hydrochloric acid, 37%** | 7647-01-0 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | 394 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Hydrofluoric acid, 48%** | 7664-39-3 | > 480 | < 10 | 120 - 240* | 179* | 120 - 240* | 60 - 120* | < 10 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Hydrogen Fluoride anhydrous** | 7664-39-3 | 90 | < 10 | < 10 | 1 | < 10 | < 10 | < 10 | 6.5 | 25 | < 10 | > 480 | N/A |
| **Hydrogen Peroxide, 30%** | 7722-84-1 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | 140 | > 480 | > 480 | > 480 | N/A | N/A |
| **Iso-octane** | 540-84-1 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 150 | > 480 | 30 - 60 | > 480 | N/A |
| **Isophorone** | 78-59-1 | > 480 | > 480 | 240 - 480 | 120 - 240 | 120 - 240 | 60 - 120 | 10 - 30 | 30 - 60 | 60 - 120 | 10 - 30 | N/A | N/A |
| **Isopropanol** | 67-63-0 | > 480 | 55 | > 480 | > 480 | > 480 | > 480 | 96 | 120 - 240 | 240 - 480 | 80 | > 480 | N/A |
| **Kerosene** | 64742-81-0 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 240 - 480 | > 480 | 60 - 120 | N/A | N/A |
| **Maleic acid, aquous solution** | 110-16-7 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | N/A | N/A |
| **Methanol** | 67-56-1 | > 480 | 5 | 129 | 28 | 70 | 30 - 60 | 6 | 116 | 154 | 41 | 240 - 480 | > 480 |
| **Methyl ethyl ketone** | 78-93-3 | > 480 | 41 | 13 | 5 | 7 | < 10 | < 5 | 9 | 5 | 7 | 10 - 30 | 76 |
| **Methyl Isobutyl Ketone** | 108-10-1 | > 480 | 60 - 120 | 10 - 30 | 27 | < 10 | < 10 | < 10 | 13 | 16 | 9 | 10 - 30 | N/A |
| **Methylamine, 40%** | 74-89-5 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | 10 - 30 | > 480 | > 480 | 10 - 30 | > 480 | N/A |
| **Methylenechloride** | 75-09-2 | 16 | > 480 | 4 | 2 | < 10 | < 10 | < 10 | 4 | < 10 | 1 | 10 - 30 | N/A |
| **Methylmethacrylate** | 80-62-6 | > 480 | 240 - 480 | 10 - 30 | 19 | 10 - 30 | < 10 | < 10 | 10 | 8 | < 10 | < 10 | N/A |
| **Methyl-t-butyl Ether** | 1634-04-4 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 60 - 120 | < 10 | 10 - 30 | < 10 | < 10 | N/A |

# Reusable chemical gloves – permeation breakthrough times in minutes

| | Product | Barrier® | PVA™ | Sol-Vex® | | AlphaTec® | | Virtex® | Neotop™ | Scorpio® | Chemi-Pro™ | ChemTek™ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Product code | 2-100 | 15-554 | 37-185 | 37-175 | 58-530<br>58-535 | 58-270 | 79-700 | 29-500 | 8-354 | 224 | 38-612 | 38-514 |
| | Material | Laminated film | Polyvinyl alcohol | Nitrile | | Nitrile | | Nitrile | Neoprene | Neoprene | Neoprene / Natural rubber blend | Viton® / butyl | Butyl |
| **Chemical name** | **CAS†** | | | | | | | | | | | | |
| **Mineral oil** | 8012-95-1 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 120 - 240 | 10 - 30 | 30 - 60 | 10 - 30 | > 480 | N/A |
| **Monochlorobenzene** | 108-90-7 | > 480 | > 480 | 10 - 30 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | > 480 | N/A |
| **Monoethanolamine** | 141-43-5 | > 480 | 240 - 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | N/A | N/A |
| **Naphta VM&P** | 8030-30-6 | > 480 | > 480 | > 480 | 84 | 60 - 120 | 30 - 60 | 30 - 60 | 30 - 60 | 60 - 120 | 10 - 30 | > 480 | N/A |
| **Nitric acid, 70%** | 7697-37-2 | > 480 | < 10 | 60 - 120* | 40* | 53* | 10 - 30* | < 5 | > 480 | > 480 | 235 | > 480 | N/A |
| **Nitrobenzene** | 98-95-3 | > 480 | > 480 | 305 | 105 | 60 - 120 | 30 - 60 | 10 - 30 | < 10 | < 10 | < 10 | > 480 | N/A |
| **N-methyl-2-pyrrolidone** | 872-50-4 | > 480 | < 10 | 10 - 30 | 10 - 30 | 10 - 30 | < 10 | < 10 | 10 - 30 | 10 - 30 | 26 | < 10 | N/A |
| **n-Undecane** | 1120-21-4 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 60 - 120 | 120 - 240 | 30 - 60 | N/A | N/A |
| **Octyl alcohol** | 111-87-5 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 240 - 480 | 120 - 240 | 120 - 240 | > 480 | > 480 | N/A |
| **Oxalic acid, aquous solution** | 144-62-7 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | < 10 | N/A |
| **Peracetic acid, 39%** | 79-21-0 | > 480 | 1 | 60 - 120 | 55 | 124 | 30 - 60 | 20 | 300 | > 480 | 62 | N/A | N/A |
| **Perchloroethylene** | 127-18-4 | > 480 | > 480 | 397 | 136 | 133 | 60 - 120 | 12 | 17 | 4 | 10 - 30 | > 480 | N/A |
| **Phenol** | 108-95-2 | > 480 | > 480 | 60 - 120 | 64 | 78 | 10 - 30 | < 10 | > 480 | > 480 | 202 | > 480 | > 480 |
| **Phosphoric acid, conc.** | 7664-38-2 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Piperazine, aquous solution** | 110-85-0 | > 480 | < 10 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | N/A | N/A |
| **Propanol** | 71-23-8 | > 480 | 68 | > 480 | > 480 | > 480 | > 480 | 30 - 60 | > 480 | > 480 | 120 - 240 | > 480 | N/A |
| **Propionitrile** | 107-12-0 | > 480 | > 480 | 10 - 30 | < 10 | < 10 | < 10 | < 10 | 10 - 30 | 98 | < 10 | N/A | N/A |
| **Propylacetate** | 109-60-4 | > 480 | > 480 | 10 - 30 | 20 | 10 - 30 | < 10 | < 10 | < 10 | < 10 | < 10 | <10 | N/A |
| **Propylene Glycol** | 57-55-6 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 60 - 120 | > 480 | > 480 | > 480 | N/A | N/A |
| **Pyridine** | 110-86-1 | > 480 | 8 | 10 - 30 | 10 | 10 - 30 | < 10 | < 10 | 12 | < 10 | 1 | < 10 | 179 |
| **Sodium Hydroxide, 50%** | 1310-73-2 | > 480 | < 5 | > 480 | > 480 | > 480 | > 480 (40%) | > 480 (40%) | > 480 | > 480 | > 480 | > 480 | > 480 |
| **Stoddard Solvent** | 8052-41-3 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 120 - 240 | 240 - 480 | 10 - 30 | > 480 | N/A |
| **Styrene** | 100-42-5 | > 480 | > 480 | 31 | 24 | 19 | < 10 | < 5 | 9 | < 5 | 8 | > 480 | N/A |
| **Sulphuric Acid, 96%** | 7664-93-9 | > 480 | < 5 | 127* | 63* | 55* | 38.6* | 13 | 201 | 302 (95%) | 149 | > 480 | 146 |
| **Tetrahydrofuran** | 109-99-9 | > 480 | 52 | 10 - 30 | 6 | < 10 | < 10 | < 10 | 6 | < 5 | < 10 | < 10 | 5 |
| **Tetrahydrothiophene** | 110-01-0 | > 480 | > 480 | 66 | 12 | 10 - 30 | < 10 | < 10 | 11 | 7 | < 10 | N/A | N/A |
| **Thionylchloride** | 2125597 | 120 - 240 | 120 - 240 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | N/A | N/A |
| **Toluene** | 108-88-3 | > 480 | > 480 | 54 | 23 | 19 | < 10 | < 5 | 7 | < 5 | 5 | 240 - 480 | < 5 |
| **Trichloroethylene** | 79-01-6 | > 480 | > 480 | 10 - 30 | 12 | 10 - 30 | < 10 | < 10 | 5 | < 10 | 3 | 120 - 240 | < 5 |
| **Tricresyl Phosphate** | 1330-78-5 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Triethanolamine** | 102-71-6 | > 480 | 240 - 480 | > 480 | > 480 | 240 - 480 | 240 - 480 | 60 - 120 | > 480 | > 480 | 240 - 480 | N/A | N/A |
| **Triethylamine** | 121-44-8 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 100 | 23 | < 5 | 5 | N/A | N/A |
| **White Spirit** | 64742-88-7 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 240 - 480 | 48 | 60 - 120 | 10 | N/A | N/A |
| **Xylene** | 1330-20-7 | > 480 | > 480 | 90 | 56 | 41 | 10 - 30 | < 5 | 8 | 17 | < 10 | > 480 | N/A |
| **Bisphenol A** | 80-05-7 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | N/A | N/A |
| **Butylglycol** | 111-76-2 | > 480 | 120 - 240 | 240 - 480 | 240 - 480 | 240 - 480 | 120 - 240 | 10 - 30 | 120 - 240 | > 480 | 30 - 60 | > 480 | N/A |
| **Distillate (petroleum), hydrotreated light** | 64742-47-8 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 240 - 480 | 10 - 30 | 30 - 60 | 10 - 30 | N/A | N/A |
| **Ethyl Glycol** | 110-80-5 | > 480 | < 10 | 120 - 240 | 120 - 240 | 120 - 240 | 60 - 120 | 30 - 60 | 60 - 120 | 290 | 10 - 30 | 240 - 480 | N/A |
| **Ethylbenzene** | 96-33-3 | > 480 | > 480 | 10 - 30 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | N/A | N/A |
| **Ethylene Glycol** | 107-21-1 | > 480 | 120 - 240 | > 480 | > 480 | > 480 | > 480 | 60 - 120 | > 480 | > 480 | > 480 | > 480 | N/A |
| **Methyl acrylate** | 96-33-3 | > 480 | > 480 | 10 - 30 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | N/A | N/A |
| **Naphta (petroleum) hydrotreated light** | 64742-49-0 | > 480 | > 480 | > 480 | > 480 | > 480 | > 480 | 120 - 240 | 10 - 30 | 60 - 120 | 10 - 30 | > 480 | N/A |
| **Naphta (petroleum), hydrodesulfurized heavy** | 64742-82-1 | > 480 | > 480 | 240 - 480 | 240 - 480 | 240 - 480 | 120 - 240 | 10 - 30 | 10 - 30 | 10 - 30 | < 10 | N/A | N/A |
| **Propan-2-ol** | 67-63-0 | > 480 | 55 | > 480 | > 480 | > 480 | > 480 | 96 | 120 - 240 | 240 - 480 | 80 | > 480 | N/A |

| **Permeation breakthrough times according to EN374-3:2003** | | > Greater than (time) < Less than (time) | | | | |
|---|---|---|---|---|---|---|
| EN374-3 = 6 | EN374-3 = 5 | EN374-3 = 4 | EN374-3 = 3 | EN374-3 = 2 | EN374-3 = 1 | EN374-3 = 0 |
| > 480 mins | 240 – 480 mins | 120 – 240 mins | 60 – 120 mins | 30 – 60 mins | 10 – 30 mins | < 10 mins |
| High protection | | Medium protection | | Splash protection | | Not recommended |

† CAS registry numbers are unique numerical identifiers for chemical elements, compounds, polymers, biological sequences, mixtures and alloys. CAS (Chemical Abstracts Service), a division of the American Chemical Society, assigns these identifiers to every chemical.

* Despite high breakthrough time, degradation might occur prematurely. Only recommended as splash protection.

N/A Not Available (no test data).

# Disposable gloves for chemical use#

| Product | Touch N Tuff® | | | Fresh Touch® | | | Conform® | | |
|---|---|---|---|---|---|---|---|---|---|
| Product code | 92-500 / 600 / 605 | | | 840 / 850 / 851 | | | 844 | | |
| Material | Nitrile | | | Vinyl | | | Natural rubber latex | | |
| Rating type | Degradation | Permeation breakthrough times in minutes | Permeation | Degradation | Permeation breakthrough times in minutes | Permeation | Degradation | Permeation breakthrough times in minutes | Permeation |
| Chemical name | | | | | | | | | |
| Acetaldehyde | P | – | – | NR | – | – | E | < 10 | F |
| Acetic Acid | E | 10 | – | G | 45 | – | E | 10 | – |
| Acetone | NR | – | – | NR | – | – | P | – | – |
| Acetonitrile | F | < 10 | G | NR | – | – | G | < 10 | G |
| Ammonium Fluoride | E | – | – | E | 240 | – | E | 360 | – |
| Ammonium Hydroxide | G | 20 | – | E | 240 | – | E | 11 | – |
| Aniline | NR | – | – | G | 20 | VG | E | < 10 | G |
| Butyl Acetate | NR | – | – | NR | – | – | NR | – | – |
| Butyl Alcohol | G | 475 | G | VG | < 10 | F | E | < 10 | G |
| Butyl Cellosolve | NR | – | – | P | – | – | E | < 10 | F |
| Citric Acid, 10% | E | > 480 | – | E | > 360 | – | E | > 480 | – |
| Cyclohexanol | E | – | – | E | 60 | E | E | < 10 | G |
| Dimethyl Formamide | NR | – | – | NR | – | – | E | < 10 | G |
| Dimethyl Sulfoxide | F | 10 | E | NR | – | – | NR | – | – |
| Ethanolamine | E | > 480 | – | E | 120 | – | E | 120 | – |
| Ethyl Acetate | NR | – | – | NR | – | – | G | < 10 | F |
| Ethyl Alcohol | F | 10 | VG | VG | < 10 | F | E | < 10 | VG |
| Ethylene Dichloride | NR | – | – | NR | – | – | NR | – | – |
| Ethylene Glycol | E | 38 | G | E | 45 | VG | – | – | – |
| Ethyl Ether | G | < 10 | G | P | – | – | F | < 10 | P |
| Formaldehyde | E | > 480 | E | E | 20 | VG | E | < 10 | E |
| Gasoline (Shell 92 oct.) | F | < 10 | G | P | – | – | NR | – | – |
| Hexane | E | > 480 | E | NR | – | – | NR | < 10 | F |
| Hydrazine | E | < 10 | F | E | > 360 | E | G | 25 | F |
| Hydrochloric Acid, conc. | E | 78 | – | G | > 360 | – | E | 55 | – |
| Hydrogen Peroxide, 30% | E | 200 | – | E | > 360 | E | E | > 480 | E |
| Isobutyl Alcohol | G | 61 | VG | G | 10 | VG | E | < 10 | F |
| Isopropyl Alcohol | E | 10 | VG | VG | < 10 | F | E | < 10 | VG |
| Kerosene | E | > 480 | – | G | 30 | G | NR | – | – |
| Maleic Acid, saturated | E | > 480 | – | VG | > 360 | – | – | – | – |
| Methyl Alcohol | E | < 10 | G | VG | 10 | G | E | < 10 | VG |
| Methyl Ethyl Ketone | NR | – | – | NR | – | – | F | < 10 | F |
| Methylene Chloride | NR | – | – | NR | – | – | NR | – | – |
| Nitric Acid, 10% | E | > 480 | E | VG | > 360 | E | G | > 480 | E |
| Octyl Alcohol | E | 350 | E | G | 9 | E | – | – | – |
| Perchloroethylene | G | 10 | G | P | – | – | NR | – | – |
| Phenol | NR | – | – | G | 30 | VG | – | – | – |
| Phosphoric Acid, 85% | – | – | – | G | > 360 | – | F | > 480 | – |
| Propyl Alcohol | E | 125 | VG | G | < 10 | F | E | < 10 | G |
| Sodium Hydroxide, 50% | E | > 480 | – | E | > 360 | – | E | > 480 | – |
| Stoddard Solvent | E | > 480 | – | G | 40 | E | NR | – | – |
| Sulfuric Acid, 47% | E | > 480 | – | G | > 480 | – | E | > 480 | – |
| Tricresyl Phosphate | G | 10 | F | G | > 360 | E | – | – | – |
| Triethanolamine, 85% | P | – | – | E | > 360 | E | E | > 480 | – |
| Xylene, Xylol | G | < 10 | F | NR | – | – | NR | – | – |

| | |
|---|---|
| E | Excellent |
| VG | Very Good |
| G | Good |
| F | Fair |
| P | Poor |
| NR | Not Recommended |

| | |
|---|---|
| | Experimental carcinogens^ |
| | Suspected carcinogens^ |
| | Well suited |
| | Suitable under careful control |
| | Avoid use |

# Disposable gloves are intended for single use only.

^ The chemicals in this guide highlighted in light blue are experimental carcinogens, according to the ninth edition of Sax's Dangerous Properties of Industrial Materials. Chemicals highlighted in grey are listed as suspected carcinogens, experimental carcinogens at extremely high dosages, and other materials which pose a lesser risk of cancer.

When the job calls for chemical protection, Ansell has the right glove for your application.

Our extensive range of gloves include products that offer splash protection for minimal chemical exposure and products that provide protection for applications involving full chemical immersion.

By utilising numerous polymer types, our gloves protect against a wide variety of chemicals and liquids. They also offer varying levels of cut, tear, abrasion, puncture and thermal resistance.

Choose from nitrile, neoprene, natural rubber latex, PVC, PVA, laminated film, vinyl, butyl or Viton®/butyl gloves.

Designed with comfort and dexterity in mind, Ansell has a wide variety of disposable and reusable options available.

## Make your chemical glove selection by following this simple step-by-step process

### Step 1: Which glove material is required for the right protection?

The first, and most important, step is to determine what type of glove and its polymer composition is required to handle the specific chemical.

Use the chemical handling chart to check out the suitability of the glove material, such as nitrile, natural rubber latex, PVC, PVA, neoprene, laminated film, vinyl, butyl or Viton®/butyl, and how it performs with the chemicals you are working with. This will help you identify the Ansell glove that best protects against specific chemicals by providing test results from Ansell's ASTM standard permeation and degradation resistance.

### Step 2: Which glove construction works best for your applications?

You need to evaluate the physical characteristics to determine the most suitable glove construction. Your choice should depend on the performance level required.

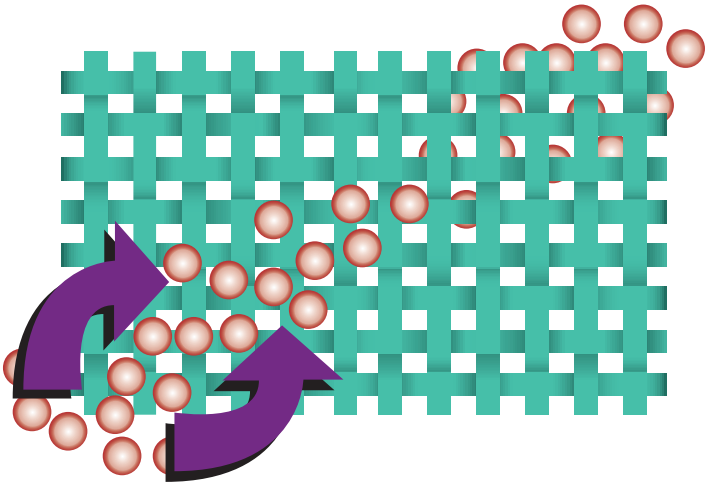
For example, the degree of contact with the chemical (immersion or splash) and whether grip is important. There are three basic options to consider:

- **Disposable**, for basic protection with frequent changing:
  - these gloves are very thin and should only be used for light duty work where frequent changes will occur; and
  - suitable where basic splash protection is needed.
- A longer lasting, **unsupported** glove where tactility, flexibility and dexterity are important:
  - these gloves, without an internal material lining, are designed to allow for good dexterity, tactility and flexibility; and
  - unsupported gloves are ideal for applications requiring the handling of small components.
- A **supported** glove, which contains a cotton liner for heavy-duty use:
  - gloves with an inner liner, typically made from knitted cotton, are suited for heavy-duty applications; and
  - supported gloves are thicker and designed for durability. They do not necessarily offer better chemical resistance than disposable and non-supported gloves; and
  - the cotton liners, however, do provide more comfort and sweat absorption.

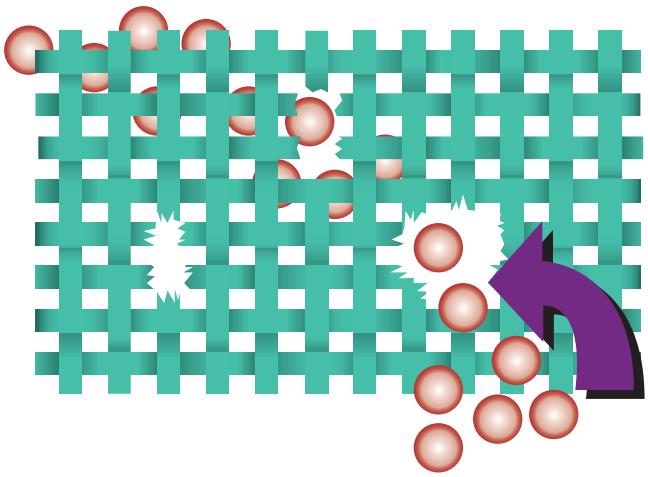
### Step 3: Which glove option, based on features, suits the user?

Ansell has one of the industry's broadest and deepest chemical glove ranges. Having determined which glove material and construction is needed, you now have to decide which features you require – such as grip, style, length, thickness, glove lining, colour and so on. Again, your primary use or requirement must be the key decision driver.

For specific details on our gloves we recommend that you check our product catalogue, which you can review or download online at www.ansellasiapacific.com/home, or, call our Customer Service and request a copy.



**Permeation** is a process by which a chemical can pass through a protective film.



**Degradation** is a reduction in one or more physical properties of a glove material.

# Questions and answers

## Q1. Why is a product with a shorter breakthrough time sometimes given a better rating then one with a longer breakthrough time?

One glove may have a breakthrough time of just 4 minutes and be rated 'very good' while another with a breakthrough time of 30 minutes is rated only as 'fair'. Why?

The reason is simple: in some cases the rating is more significant than the time. A combination of a short breakthrough time and a low permeation rate may expose a glove wearer to less chemical then a combination of a longer breakthrough rate, if the glove is worn long enough.

## Q2. What factors should you consider?

You need to know more than just the name of the chemical. If, for example, an employee is working with nitric acid, then PVC (vinyl) and neoprene are the preferred glove materials. Several questions however, must still be answered. For example:

- is the worker cleaning up spills? If so, you will need highly chemical-resistant gloves with good storage stability;
- is the person handling abrasive materials? If so, the worker may need a glove with an abrasion-resistant coating; and
- is the employee working with a pure chemical or a diluted solution? And if the chemical is diluted, what solvent has been used?

The above scenarios give you an idea of the questions you need to consider as part of your decision making process.

## Q3. How important is it to trial the gloves being recommended?

Our chemical handling charts are intended to guide and inform your workplace safety decisions. Because the conditions of ultimate use are beyond our control, and because we cannot run permeation tests in all possible work environments and across all combinations of chemical and solutions, our recommendations are advisory only. To demonstrate a particular glove's 'fit for purpose', we recommend practical trials before a decision is made. You should verify that the glove selected is suitable for the intended use and meets all health standards. Upon request we will consider providing samples for trials.

## Q4. Is there a quick and easy way to find a recommended shortlist of gloves?

If you already know the CAS (Chemical Abstract Service) number or the chemical agent's name, you can fast track your search by using our glove selector Search tool at www.ansellasiapacific.com/chemical-glove-guide.


**Australia:** Level 3, 678 Victoria Street, Richmond, Victoria 3121
Telephone: 1800 337 041
Facsimile: 1800 803 578

**China:** Room 903-905, Hongwell Tower, No. 1600 Zhongshan West Road, Shanghai 200 235
Telephone: +86 21 2407 2286
Facsimile: +86 21 5407 1107

**Malaysia:** Lot 16, Persiaran Perusahaaan Section 23, Shah Alam 40000
Telephone: +60 3 5541 9797
Facsimile: +60 3 5549 4397

**Japan:** 2nd Floor, Ochanomizu Wing Building, 15-13 Hongo 2-chrome, Bunkyo-ku, Tokyo 113 0033
Telephone: +81 3 5805 3781
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