Chemical Compatibility Guide for:

Microflex Nitrile and Latex Gloves

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MICROFLEX

CHEMICAL RESISTANCE GUIDE

MICROFLEX®
THE MOST TRUSTED NAME IN GLOVES®
REGISTERED ISO13485

CHEMICAL RESISTANCE GUIDE

FOR MICROFLEX LATEX AND NITRILE GLOVES.

The following chemical resistance ratings are based on published research data. Microflex® gloves have not been individually tested against the chemicals contained in this chart.

Chemicals	Latex (NATURAL RUBBER)	Nitrile (BUNA N)
Acetaldehyde		
Acetamide		
Acetic acid (50% concentration)		
Acetone		
Acetonitrile		
Acetophenone		
Acetyl chloride		
Acrylamide (same as 2-propenamide)		
Acrylic acid		
Aircraft stripper		
Aluminum nitrate (nonhydrous) (10% concentration)		
Ammonia (anhydrous)		
Ammonium benzoate (same as benzoic acid)		
Ammonium hydroxide (30% concentration)		
Ammonium hydroxide (concentrated)		
Ammonium oxalate		
Ammonium sulfate (aqueous)		
Amyl acetate		
Aniline		
Antifreeze (methanol-based)		
Benzaldehyde		
Benzene		
Benzoic acid		
Boric acid		
Brake cleaner (containing hexane or ethanol)		
Brake cleaner, non-chlorinated (containing acetone, n-heptane and/or xylene)		
Brake fluid		
Bromine (anhydrous liquid)		
Bromoethane (methyl bromide)		
Butyl acetate		
n-Butyl alcohol (propyl carbinol)		
n-Butyl chloride		
1, 3-Butylene glycol (1,3-butanediol)		
Calcium chloride (aqueous)		
Calcium hydroxide (dental)		
Carbamide peroxide (urea+hydrogen peroxide at 1:1 ratio)		
Carbon dioxide		

Chemicals	Latex (NATURAL RUBBER)	Nitrile (BUNA N)
Hydrogen peroxide (30% concentration)		
Hydrogen peroxide (concentrated)		
Hydroquinone		
Hydroxylamine hydrochloride		
Imidazole		
Isobutanol (isobutyl alcohol)		
Isooctane		
Isopropanol (isopropyl alcohol)		
Kerosene		
Ketones		
Lacquers		
Lacquer thinners		
Lactic acid (85% concentration)		
Laurel alcohol (lauryl alcohol)		
Lauric acid (36% concentration)		
Lead acetate		
Linoleic acid		
Linseed oil		
Lubricants (containing mineral spirits as primary component)		
Maleic acid		
2-Mercaptoethanol		
Mercuric chloride		
Mercury		
Methane		
Methyl alcohol (methanol)		
2-Methoxyethanol (ethylene glycol monomethyl)		
Methyl amine		
Methyl bromide		
Methyl butyl ketone		
Methylene chloride		
Methyl chloride		
Methyl ethyl ketone (MEK)		
Methyl isobutyl ketone (MIBK)		
Methyl methacrylate		
Mineral spirits		
Monoethanolamine		
Morpholine		

Chemicals	Latex (NATURAL RUBBER)	Nitrile (BUNA N)
Carbon disulfide		
Carbon tetrachloride		
Carburetor cleaner (typically xylene, toluene and/or acetone		
Castor Oil		
Chlorine (wet)		
Chlorobenezene		
Chloroform		
o-Chloronaphthalene		
Chromic acid (50% concentration)		
Citric acid (10% concentration)		
Clonidine hydrochloride (0.1% concentration)		
Cresols		
Cupric sulfate (copper sulfate)		
Cyanic compounds		
Cyclohexane		
Cyclohexanol		
Cyclohexanone		
Decahydronaphthalene (decalin)		
Denatured alcohol		
Dental etching material		
Dental resin cement		
Dental waxes		
Denture polishing material		
Detergent solutions		
Developing fluids		
Diamond polishing paste		
Dibutyl phthalate		
o-dichlorobenzene		
p-dichlorobenzene		
Dichloromethane		
Diesel fuel		
Diesel fuel additive		
Diethylamine		
Diethylene glycol		
Diisobutyl ketone (DIBK)		
N, N-dimethyl acetamide (same as dimethyl acetamide (DMAC), same as acetic acid)		
Dimethylformamide		
Dimethyl sulfoxide (DMSO)		
Dioctyl phthalate (DOP)		
Dioxane		
EDTA (17% solution)		
Engine cleaner and degreaser (containing kersosene, petroleum distillates or propane-isobutane-n-butane as main components)		
Epoxy primer (containing toluene, acetone, MEK and/or n-butyl acetate)		
Ethanol (ethyl alcohol) (95% concentration)		
Ethanolamine		
Ether		
Ethidium bromide (0.5% concentration)		
2-ethoxyethanol (ethoxyethanol)		
Ethyl acetate		
Ethyl ether		
Ethylene dichloride		
Ethylene glycol		

Chemicals	Latex (NATURAL RUBBER)	Nitrile (BUNA N)
Motor oil (includes oils made from petroleum distillates, synthetic oils, diesel oils, 2-stroke oils, and hydraulic oils)		
Naphtha		
Naphthalene		
Nitric acid (50% concentration)		
Nitromethane (95.5% concentration)		
Nitropropane (95.5% concentration)		
Nitrophenols		
Octyl alcohol (octanol)		
Oleic acid		
Oxalic acid		
Paint (latex-based)		
Paint (oil-based)		
Paint, automotive (paint containing V.M.&P. naphtha, mineral spirits; with small amounts of toluene, xylene or n-butyl acetate)		
Paint, automotive (paints containing large amounts of toluene, xylene or n-butyl acetate)		
Paint activator, automotive (containing MEK, polyisocyanate resin, and/or butyl acetate)		
Paint reducers/thinners, automotive (aliphatic hydrocarbons, eg. V.M.&P. naphtha or mineral spirits)		
Paint reducers/thinners, automotive (aromatic hydrocarbons, eg. toluene or xylene)		
Paint thinner (Duco)		
Palmitic acid		
Paraformaldehyde		
Parts wash, automotive (containing naphtha, n-hexane, cyclohexane and/or MEK)+A64		
Pentane		
Pentyl ether (same as pentane)		
Perchloric acid (60% concentration)		
Perchloroethylene		
Periodic acid (50% concentration)		
Petroleum distillates (naphthas)		
Phenol (0.1% concentration)		
Phenol (approx. 100% concentration)		
Phenolphthalein (aromatic phenols)		
Phosphoric acid (0 to 50% concentration)		
Phosphoric acid (50-85% concentration)		
Phosphoric acid (100% concentration)		
Polysorbates		
Potassium bromate		
Potassium chloride		
Potassium cyanide		
Potassium dichromate (aqueous)		
Potassium hydroxide		
Potassium iodide		
Potassium permanganate		
Potassium sulfate (potassium sulphate)		
Propyl acetate		
Propyl alcohol		
Propylene (1-propene, methylethyelene)		
Propylene glycol		
Pyridine		
Rust inhibitors, automotive		
Rust remover, automotive (containing <50% phosphoric aid)		
Silver nitrate (0.17N)		
Sodium acetate (aqueous)		
Sodium azide (sodium salt)		

Chemicals	Latex (NATURAL RUBBER)	Nitrile (BUNA N)
Ethylene oxide	NOT RECOMMENDED	NOT RECOMMENDED
Ferric chloride (aqueous)	EXCELLENT	EXCELLENT
Formaldehyde	GOOD	GOOD
Formalin (40% concentration of formaldehyde)	GOOD	GOOD
Formamide	NO DATA	EXCELLENT
Formic acid (90% concentration)	GOOD	GOOD
Freon 11	NOT RECOMMENDED	GOOD
Freon 12	NOT RECOMMENDED	GOOD
Freon 21	NOT RECOMMENDED	NOT RECOMMENDED
Freon 22	NOT RECOMMENDED	NOT RECOMMENDED
Fuel injector cleaner (primarily kerosene)	NOT RECOMMENDED	GOOD
Furfural	NOT RECOMMENDED	NOT RECOMMENDED
Gasoline, leaded	NOT RECOMMENDED	EXCELLENT
Gasoline, unleaded	NOT RECOMMENDED	EXCELLENT
Glass ionomer dental cements	GOOD	GOOD
Glucose	EXCELLENT	EXCELLENT
Gluteraldehyde (50% concentration)	NO DATA	NO DATA
Glycerin	EXCELLENT	EXCELLENT
Glycerol	EXCELLENT	EXCELLENT
Grease, automotive (petroleum-based)	NOT RECOMMENDED	EXCELLENT
Grease, automotive (silicon-based)	GOOD	GOOD
Grease, automotive (synthetic)	NOT RECOMMENDED	GOOD
Heptane (n-heptane)	NOT RECOMMENDED	EXCELLENT
Hexane	NOT RECOMMENDED	GOOD
Hydraulic fluid (petroleum-based)	NOT RECOMMENDED	GOOD
Hydrochloric acid (20% concentration)	EXCELLENT	GOOD
Hydrochloric acid (50% concentration)	EXCELLENT	FAIR
Hydrochloric acid (concentrated)	GOOD	NOT RECOMMENDED
Hydroflouric acid (48% concentration)	FAIR	GOOD
Hydroflouric acid (concentrated)	NOT RECOMMENDED	NOT RECOMMENDED
Hydrogen peroxide (3% concentration)	GOOD	GOOD

Chemicals	Latex (NATURAL RUBBER)	Nitrile (BUNA N)
Sodium bicarbonate (aqueous) (baking soda)	EXCELLENT	EXCELLENT
Sodium chloride (aqueous)	EXCELLENT	EXCELLENT
Sodium cyanide (aqueous)	EXCELLENT	EXCELLENT
Sodium hydroxide (50% concentration)	EXCELLENT	EXCELLENT
Sodium hypochlorite (bleach)	FAIR	FAIR
Sodium selenate (10% concentration)	NO DATA	NO DATA
Sodium thiosulfate (developing fluids)	GOOD	GOOD
Staining rating (all stains)	EXCELLENT	FAIR
Styrene	NOT RECOMMENDED	NOT RECOMMENDED
Sulfuric acid (50% concentration)	EXCELLENT	EXCELLENT
Sulfuric acid (93-98% concentration)	NOT RECOMMENDED	NOT RECOMMENDED
Tannic acid (65% concentration)	EXCELLENT	EXCELLENT
Tetrachloroethylene	NOT RECOMMENDED	FAIR
Tetrahydrofuran	NOT RECOMMENDED	NOT RECOMMENDED
Tetramethylurea	NO DATA	NO DATA
Toluene	NOT RECOMMENDED	NOT RECOMMENDED
Toluene diisocyanate	FAIR	NOT RECOMMENDED
Transmission fluid, Type A	NOT RECOMMENDED	EXCELLENT
Transmission fluid, synthetic	NOT RECOMMENDED	GOOD
Trichloroethylene	NOT RECOMMENDED	NOT RECOMMENDED
Triethanolamine	GOOD	GOOD
Triton X-100, Igepal CA, Polytergent G (octoxynol with varying ethylene oxide units)	EXCELLENT	EXCELLENT
Tung oil	NOT RECOMMENDED	EXCELLENT
Turpentine	NOT RECOMMENDED	EXCELLENT
Undercoater, rubberized (automotive)	NOT RECOMMENDED	GOOD
Urea	EXCELLENT	GOOD
Varnish	NOT RECOMMENDED	GOOD
Vinyl chloride	NOT RECOMMENDED	NOT RECOMMENDED
Water	EXCELLENT	EXCELLENT
Wax remover, automotive (containing V.M.&P. naphtha, xylene and/or ethylbenzene)	NOT RECOMMENDED	NOT RECOMMENDED
Xylene (Xylol)	NOT RECOMMENDED	NOT RECOMMENDED

Custom Chemical Testing

For chemicals not listed, or for applications that use a specific concentration or combination of chemicals, Microflex offers a custom chemical testing program specifically for its glove products. Please contact your distributor representative or Microflex directly at 800-876-6866 to learn more about this program.

General Information and Cautions

Your understanding of how to use thin-film gloves is extremely important to your safety.

Microflex gloves are intended for use as protection against incidental exposure to chemicals and other harmful substances. These gloves do not offer protection against all chemicals under all conditions, and are not designed to provide protection against prolonged or continuous exposure to harmful substances.

As a precaution, glove users are advised to change gloves immediately upon exposure to harmful substances. It is the responsibility of the user to choose the appropriate glove type, thickness and to change gloves as they become contaminated.

– CHEMICAL RATINGS KEY –

- EXCELLENT
- GOOD
- FAIR
- NOT RECOMMENDED
- NO DATA

This Chemical Resistance Chart is offered as a guide and for reference purposes only. The chemical resistance ratings are based on published research data. Microflex cannot certify the accuracy of the data and therefore does not represent nor warrant that the information in the chemical resistance chart is accurate or complete. Microflex gloves have **NOT** been individually tested against the chemicals contained in this chart. The barrier properties of each glove type may be affected by differences in material thickness, chemical concentration, temperature, and length of exposure to chemicals.

References

Chemical Resistance Guide to Elastomers III; A Guide to Chemical Resistance of Rubber and Elastomeric Compounds, Compass Publications, La Jolla, CA, 2005. Plastics Design Library-Chemical Resistance of Plastics and Elastomers, 3rd edition, William Andrew Publishing, 2003. Dupont Dow Elastomers Chemical Resistance Guide; The Los Angeles Rubber Group; www.dupont-dow.com