



CHEMICAL RESISTANCE CHART

Plasticized PVC (Polyvinyl Chloride)

R – recommended
L - limited recommendation
X - not recommended

REAGENT	Temperature			REAGENT	Temperature			REAGENT	Temperature		
	23°C (72°F)	50°C (122°F)	68°C (155°F)		23°C (72°F)	50°C (122°F)	68°C (155°F)		23°C (72°F)	50°C (122°F)	68°C (155°F)
Acetaldehyde (100%) Acetic Acid (10%) Acetic Acid (100%)	X R X	X L X	X X X	Bismuth Carbonate Bleach (16% Chlorine) Boric Acid	R R R	R L R	R X L	Dextrin Dextrose Dibutyl Phthalate	R R X	R R X	R R X
Acetic Anhydride Acetone Allyl Alcohol	X X X	X X X	X X X	Brine (Salt) Bromic Acid (10%) Bromine (Liquid) (100%)	R R X	R L X	L X X	Diethyl Ketone Dimethylamine Disodium Phosphate	X X R	X X R	X X R
Allyl Chloride Alum Aluminum Chloride	X R R	X R R	X R R	Bromine (Water) Butyl Alcohol (100%) Butyl Phenol	R X X	R X X	X X X	Distilled Water Ethyl Acetate Ethyl Alcohol	R X L	R X X	R X X
Aluminum Fluoride (20%) Aluminum Hydroxide Aluminum Sulfate (50%)	R R R	R R R	L R R	Butyric Acid (20%) Calcium Bisulfate Calcium Carbonate	X R R	X R R	X R R	Ethyl Bromide Ethyl Chloride Ethyl Ether	X X X	X X X	X X X
Ammonium Carbonate Ammonium Chloride Ammonium Fluoride (20%)	R R R	R R R	R R X	Calcium Chloride Calcium Hydroxide Calcium Hypochlorite	R R R	R R L	R R X	Ethylene Glycol Fatty Acid Ferric Chloride	R R R	L L R	X X L
Ammonium Hydroxide (10%) Ammonium Hydroxide (20%) Ammonium Hydroxide (30%)	R R R	R L X	X X X	Calcium Nitrate Calcium Sulfate Carbon Bisulfide	R R X	R R X	R R X	Ferric Nitrate Ferric Sulfate Ferrous Chloride	R R R	R R R	X R L
Ammonium Nitrate Ammonium Sulfate Ammonium Sulfide	R R R	R R R	R R R	Carbon Disulfide Carbon Tetrachloride Carbonic Acid	X X R	X X L	X X X	Ferrous Sulfate Fertilizers Fluoboric Acid	R R R	R L R	L X R
Amyl Acetate (100%) Amyl Alcohol (100%) Amyl Chloride (100%)	X X X	X X X	X X X	Castor Oil Chloroacetic Acid (100%) Chlorine Dioxide (15%)	R X R	R X L	X X X	Flourine (Gas) Fluosilicic Acid Formaldehyde (37%)	R R R	X R L	X X X
Aniline (100%) Antimony Trichloride Apple Cider	X R R	X R L	X R X	Chlorine, Water Chlorobenzene Chloroform	R X X	R X X	R X X	Formic Acid Fruit Juices Fruit Pulp	L R R	L L L	L L L
Aqua Ammonia (10%) Aqua Ammonia (20%) Aqua Ammonia (30%)	R R R	R L X	X X X	Chlorosulfonic Acid Chrome Alum Chrome Liquor	X R R	X R R	X R L	Furfural Gallic Acid Gasoline	X X L	X X X	X X X
Aqua Regia Arsenic Acid Barium Carbonate	L R R	X L R	X X R	Chromic Acid (10%) Chromic Acid (30%) Chromium Tioxide	R R R	R R R	R X L	Glucose Glycerine Grape Sugar	R R R	R L L	R L L
Barium Chloride Barium Hydroxide Barium Sulfate	R R R	R R R	R R R	Citric Acid Copper Chloride Copper Nitrate	R R R	R R R	L R R	Hydrobromic Acid Hydrochloric Acid (10%) Hydrochloric Acid (20%)	R R R	R R R	X L L
Barium Sulfide Battery Acid Beer	R R R	L R L	X L X	Copper Sulfate Corn Syrup Cottonseed Oil	R R R	R R R	R X L	Hydrochloric Acid (38%) Hydrofluoric Acid (10%) Hydrofluoric Acid (48%)	L R L	X R X	X L X
Benzaldehyde Benzene Benzoic Acid	X X R	X X L	X X X	Cuprous Chloride Cyclohexanol Cyclohexanone	R X X	R X X	R X X	Hydrofluosilicic Acid Hydrogen Peroxide (3%) Hydrogen Peroxide (30%)	R R R	R R L	X R X

(CONTINUED OVER)

REAGENT	Temperature			REAGENT	Temperature			REAGENT	Temperature		
	23°C (72°F)	50°C (122°F)	68°C (155°F)		23°C (72°F)	50°C (122°F)	68°C (155°F)		23°C (72°F)	50°C (122°F)	68°C (155°F)
Hydrogen Sulfide Hydroquinone Inks	R X L	L X L	X X L	Plating Solutions Brass, Cadmium, Copper, Gold, Lead, Nickel, Rhodium, Silver, Tin, Zinc Chromium	R R	R R	R L	Sodium Hydrochlorite (16%) Sodium Nitrate Sodium Sulfate	R R R	L R R	X L R
Iodine Kerosene Kymene 557	X R R	X L X	X X X					Sodium Sulfide (10%) Sodium Sulfite (10%) Stannic Chloride	R R R	R R R	R R R
Kymene 709 Lactic Acid (28%) Lead Acetate	R R R	X L L	X X X					Stannous Chloride (25%) Stearic Acid Sugar Solution	R R R	L L R	X X L
Magnesium Carbonate Magnesium Chloride Magnesium Hydroxide	R R R	R R R	L R R	Polyvinyl Acetate Potassium Bicarbonate Potassium Bromate	R R R	X R R	X R R	Sulfur Dioxide (Gas) Sulfuric Acid (10%) Sulfuric Acid (35%)	R R R	R R R	X R L
Magnesium Nitrate Magnesium Sulfate Malic Acid	R R R	R R L	L L X	Potassium Bromide Potassium Carbonate Potassium Chloride	R R R	R R R	R R R	Sulfuric Acid (50%) Sulfuric Acid (98%) Sulfurous Acid	R L R	L X L	X X X
Mercuric Chloride Mercurous Nitrate Mercury	R R R	R R R	L L R	Potassium Chromate Potassium Cyanide Potassium Ferricyanide	R R R	R R R	R L R	Tannic Acid Tanning Liquors Tetraethyl Lead	R R X	L R X	X X X
Methyl Alcohol Methyl Ethyl Ketone Molasses	L X R	L X R	X X L	Potassium Fluoride Potassium Hydroxide (10%) Potassium Hydroxide (50%)	R R L	R R X	R L X	Tetrahydrofuran Toluene Trichloroethylene	X X X	X X X	X X X
Muriatic Acid Mustard Nickel Sulfate	R R R	R R R	L L R	Potassium Nitrate Potassium Perchlorate Potassium Permanganate	R R R	R R R	R L L	Triethanolamine Trisodium Phosphate Turpentine	X R X	X R X	X R X
Nitric Acid (10%) Nitric Acid (15%) Nitric Acid (25%)	R R R	R R L	L X X	Potassium Sulfate Sea Water Silver Nitrate	R R R	R R R	R R R	Urea Vanilla Extract Vinegar	R X R	R X R	X X L
Nitrobenzene Oakite No. 31 Oleic Acid	X R R	X L X	X X X	Sodium Acetate Sodium Bicarbonate Sodium Bisulfite	R R R	L R R	X R L	Water Demineralized, Distilled, Potable, Sea, Deionized	R	R	R
Oleum Oxalic Acid Perchloric Acid (10%)	X R R	X R R	X L X	Sodium Borate Sodium Carbonate Sodium Chlorate	R R R	R R R	R R L				
Perchloric Acid (70%) Phenol Acid Phosphoric Acid (15%)	X X R	X X R	X X R	Sodium Chloride Sodium Dichromate Sodium Ferrocyanide	R R R	R R R	L R R	White Water Wine Xylene	R R X	R L X	L X X
Phosphoric Acid (85%) Phosphorus (Yellow) Phosphorous Pentoxide	R R R	R X X	L X X	Sodium Fluoride Sodium Hydroxide (10%) Sodium Hydroxide (50%)	R R R	R R L	R R X	Yeast Zinc Chloride Zinc Sulfate	R R R	R R R	R R R

The above ratings are based on the consideration of chemical resistance only. Potable water will not attack flexible vinyls. But to store it safely from the standpoint of toxicity, a specially formulated vinyl must be used. This would also apply to any material that is intended for human consumption. In this latter category, the possibility of the migration of very small amounts of plasticizer having an effect on the taste of the stored liquid should be considered.

Most of the service conditions are based on constant use at a specific temperature. In some applications, the temperature can be exceeded without liner damage but may decrease the life expectancy. Contact KENTAIN for more information.

KENTAIN PRODUCTS LIMITED

55 Howard Place
Kitchener, Ontario
N2K 2Z4
Telephone (519) 576-0994
Fax (519) 576-0919

This tabulation is based on laboratory tests and records of actual service performance. It should be used as a guide only. Each application varies. Therefore no guarantee, explicit or implied, is given that similar results will be obtained in your actual operating conditions. Whenever KENTAIN liners are to be used in a particular application where no previous operating experience is available, preliminary testing should be done by the user or fabricator.