



Chemical Resistance Properties of Anko Products Tubing

E = Excellent G = Good F = Fair X = Not Recommended Environment, % Conc.* w = Water alc = Alcohol

* If concentration is not indicated, assume 100% concentration or the maximum percent solubility in water.

** Chemical resistance ratings based on inner liner material.

NOTE: Concentrations of room temperature liquids are given in % volume. Concentrations of room temperature solids are given in % weight.

Chemical	Tubing Formulations											
	Tygon® A-60-G	Tygon® A-60-F	Tygon® B-44-3	Tygon® E-3603	Tygon® E-LFL	Tygon® XL-60	Versilon™ SPX-50	Tygon® 3350	Tygon® 2001	Pharmed® BPT	Tygon® F-4040-A	Fluran® F-5500-A
Acetaldehyde	X	X	X	X	X	F	F	F	X	X	X	X
Acetamide, 67% in w	G	G	X	X	X	G	G	G	G	G	X	X
Acetate Solvents (general)	G	G	X	X	X	X	X	X	X	G	X	X
Acetic Acid, 10% in w	E	E	E	E	E	E	E	E	G	E	E	X
Acetic Acid, 50-60% in w	G	G	G	E	E	E	E	E	E	G	E	X
Acetic Acid, Glacial, 100%	G	G	F	F	F	F	X	X	G	G	X	X
Acetic Anhydride	E	E	X	X	X	E	F	F	E	E	X	X
Acetone	X	X	X	X	X	X	X	X	F	X	X	X
Acetonitrile	G	G	X	X	X	X	X	X	G	G	X	X
Acetyl Bromide	F	F	X	X	X	F	X	X	F	F	X	X
Acetyl Chloride	F	F	X	X	X	F	X	X	F	F	X	X
Acetylene Gas	E	E	E	E	E	E	F	F	E	E	E	E
Acrylonitrile	G	G	X	X	X	X	X	X	G	G	X	X
Adipic Acid, 100% in alc	G	G	X	X	X	F	X	X	G	G	F	X
Air	E	E	E	E	E	E	E	E	E	E	E	E
Alcohols General	E	E	X	X	X	F	E	E	E	E	G	X
Aliphatic Hydrocarbons	X	X	X	X	X	X	X	X	X	X	G	G
Allyl Alcohol	F	F	X	X	X	F	X	X	E	F	E	E
Alum, 5% in w	E	E	E	E	E	E	E	E	E	E	E	E
Aluminum Chloride, 53% in w	E	E	E	E	E	E	E	E	E	E	E	E
Aluminum Hydroxide, 2% in w	E	E	E	E	E	E	E	E	E	E	E	E
Aluminum Sulfate, 50% in w	E	E	E	E	E	E	E	E	E	E	E	E
Aluminum Salts	E	E	E	E	E	E	E	E	E	E	E	E
Amines	F	F	X	X	X	F	X	X	X	F	X	X
Ammonia Gas	E	E	E	E	E	E	X	X	E	E	E	X
Ammonia, Anhydrous Liquid	G	G	G	G	G	E	X	X	G	E	G	X
Ammonium Acetate, 45% in w	E	E	E	E	E	E	E	E	E	E	E	X
Ammonium Carbonate, 50% in w	E	E	E	E	E	E	E	E	E	E	E	E
Ammonium Hydroxide, 5-10% in w	E	E	X	X	X	E	X	X	E	E	G	X
Ammonium Hydroxide, 30% in w	E	E	F	F	F	E	X	X	E	E	F	X

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	Tygon® A-60-G	Tygon® A-60-F	Tygon® B-44-3	Tygon® E-3603	Tygon® E-LFL	Tygon® XL-60	Versilon™ SPX-50	Tygon® 3350	Tygon® 2001	Pharmed® BPT	Tygon® F-4040-A	Tygon® F-5500-A
Mineral Oil	X	X	G	G	G	F	X	X	X	X	E	E
Mineral Spirits	X	X	X	X	X	X	X	X	X	X	G	E
Molasses	E	E	E	E	E	E	E	E	E	E	E	E
Monoethanolamine	F	F	X	X	X	E	X	X	X	F	X	X
Motor Oil	X	X	X	X	X	X	X	X	X	X	E	E
Naphtha	X	X	X	X	X	X	X	X	X	X	G	E
Naphthalene	X	X	X	X	X	X	X	X	X	X	G	E
Natural Gas	E	E	E	E	E	E	F	F	E	E	E	E
Nickel Chloride, 40% in w	E	E	E	E	E	E	E	E	E	E	E	E
Nickel Nitrate, 75% in w	E	E	E	E	E	E	E	E	E	E	E	E
Nickel Salts	E	E	E	E	E	E	E	E	E	E	E	E
Nickel Sulfate, 25% in w	E	E	E	E	E	E	E	E	E	E	E	E
Nitric Acid, 10% in w	E	E	E	E	E	E	F	F	E	E	X	E
Nitric Acid, 35% in w	E	E	G	G	G	E	X	X	E	E	X	F
Nitric Acid, 68-71% in w	X	X	X	X	X	E	X	X	E	X	X	X
Nitrobenzene	X	X	X	X	X	X	X	X	X	X	X	X
Nitromethane	X	X	X	X	X	X	X	X	X	X	X	X
Nitrous Acid, 10% in w	E	E	E	E	E	E	G	G	E	E	F	E
Nitrous Oxide	E	E	E	E	E	E	G	G	E	E	E	E
Oils, Animal	F	F	F	X	X	F	E	E	G	F	E	E
Oils, Essential	X	X	X	X	X	X	X	X	X	X	F	E
Oils, Hydraulic (Phosphate Ester)	X	X	F	X	X	X	X	X	X	X	E	E
Oils, Hydrocarbon	X	X	X	X	X	X	G	G	X	X	E	E
Oils, Vegetable	F	F	F	X	X	F	E	E	G	F	E	E
Oleic Acid	F	F	X	X	X	F	F	F	X	F	G	E
Oleum, 25% in w	E	E	E	E	E	G	G	G	E	E	G	E
Ortho Dichlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X
Oxalic Acid, 12% in w	G	G	F	F	F	E	F	F	E	G	X	X
Oxygen	E	E	E	E	E	E	E	E	E	E	E	E
Ozone, 300pphm	E	E	E	E	E	E	X	X	E	E	E	E
Palmitic Acid, 100% in ether	F	F	X	X	X	X	F	F	F	F	G	E
Paraffins	X	X	X	X	X	X	X	X	X	X	G	G
Perchloric Acid, 67% in w	E	E	F	X	X	E	X	X	E	E	X	E
Perchloroethylene	F	F	X	X	X	F	X	X	X	F	X	X
Phenol, 5-10% in w	E	E	E	G	G	X	X	X	E	E	E	E
Phenol, 91% in w	E	E	G	F	F	X	X	X	E	E	F	E
Phosphoric Acid, <10% in w	E	E	E	E	E	E	X	X	E	E	E	E
Phosphoric Acid, 25% in w	E	E	E	E	E	E	X	X	E	E	E	E
Phosphoric Acid, 85% in w	E	E	F	F	F	G	X	X	E	E	X	E
Phosphorous Trichloride Acid	G	G	F	F	F	G	X	X	E	G	X	G
Photographic Solutions	G	G	E	E	E	G	F	F	E	G	E	E
Phthalic Acid, 9% in alc	E	E	F	X	X	X	F	F	E	E	F	E
Phthalic Anhydride, 9% in alc	E	E	X	X	X	G	F	F	E	E	X	X

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	Tygon® A-60-G	Tygon® A-60-F	Tygon® B-44-3	Tygon® E-3603	Tygon® E-LFL	Tygon® XL-60	Versilon™ SPX-50	Tygon® 3350	Tygon® 2001	Pharmed® BPT	Tygon® F-4040-A	Tygon® F-5500-A
Picric Acid, 1% in w	X	X	E	E	E	X	X	X	E	X	E	E
Plating Solutions	E	E	E	E	E	G	X	X	E	E	X	E
Potassium Carbonate, 55% in w	E	E	E	E	E	E	E	E	E	E	E	E
Potassium Cyanide, 33% in w	E	E	E	E	E	E	E	E	E	E	E	E
Potassium Dichromate, 5% in w	E	E	E	E	E	E	E	E	E	E	E	E
Potassium Hydroxide, <10% in w	E	E	X	X	X	E	G	G	E	E	X	E
Potassium Hypochlorite, 70% in w	E	E	G	F	F	G	E	E	E	E	E	E
Potassium Iodide, 56% in w	E	E	E	E	E	E	E	E	E	E	E	E
Potassium Permanganate, 6% in w	E	E	E	E	E	E	E	E	E	E	E	E
Potassium Salts	E	E	E	E	E	E	E	E	E	E	E	E
Propane Gas	E	E	E	E	E	E	F	F	E	E	E	E
Propyl Alcohol (Propanol)	F	F	X	X	X	F	X	X	E	X	E	E
Propylene Glycol	E	E	E	E	E	E	E	E	E	E	E	E
Propylene Oxide	E	E	E	E	E	E	E	E	E	E	E	E
Pyridine	F	F	X	X	X	E	X	X	F	F	X	X
Salicylic Acid, 1% in w	E	E	E	E	E	E	E	E	E	E	E	X
Silicone Oils	F	F	G	G	G	E	X	X	G	F	E	E
Silver Nitrate, 55% in w	E	E	E	E	E	E	E	E	E	E	E	E
Skydrol 500A	X	X	F	X	X	X	X	X	X	X	E	E
Soap Solutions	G	G	E	E	E	E	F	F	E	G	E	E
Sodium Acetate, 55% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Benzoate, 22% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Bicarbonate, 7% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Carbonate, 7% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Chlorate, 45% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Chloride, 20% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Cyanide, 30% in w	E	E	E	E	E	E	G	G	E	E	X	E
Sodium Fluoride, 3% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Hydroxide, 10-15% in w	E	E	X	X	X	E	G	G	E	E	X	E
Sodium Hydroxide, 30-40% in w	E	E	F	F	F	E	G	G	E	E	X	E
Sodium Hypochlorite, 5.5% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Hypochlorite, 12.2% in w	E	E	G	F	F	E	G	G	E	E	E	E
Sodium Nitrate, 3.5% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Salts	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Sulfate, 5% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Sulfide, 45% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sodium Sulfite, 10% in w	E	E	E	E	E	E	E	E	E	E	E	E
Stannic Chloride, 50% in w	E	E	E	E	E	E	E	E	E	E	F	E
Stannous Chloride, 45% in w	E	E	E	E	E	E	E	E	E	F	E	E
Stearic Acid, 5% in alc	F	F	X	X	X	E	F	F	F	X	G	E
Styrene Monomer	X	X	X	X	X	X	X	X	X	X	X	F
Sulfur Chloride	X	X	X	X	X	E	X	X	E	E	X	E
Sulfur Dioxide, Gas Dry	E	E	E	E	E	E	G	G	E	E	G	E

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Sulfur Dioxide, Gas Wet	E	E	E	E	E	E	G	G	E	G	G	E
Sulfur Trioxide, Wet	E	G	G	G	G	E	F	F	G	E	X	G
Sulfuric Acid, 10% in w	E	E	E	E	E	E	E	E	E	E	E	E
Sulfuric Acid, 30% in w	E	E	E	E	E	E	G	G	E	X	G	E
Sulfuric Acid, 95-98% in w	X	X	X	X	X	E	X	X	X	E	X	E
Sulfurous Acid	E	E	E	E	E	E	E	E	E	G	E	E
Tannic Acid, 75% in w	G	G	F	F	F	E	F	F	E	E	X	X
Tartaric Acid, 56% in w	E	E	E	E	E	E	G	G	E	X	E	E
Tetrahydrofuran	X	X	X	X	X	X	X	X	X	E	X	X
Thionyl Chloride	E	E	E	E	E	E	G	G	E	E	G	E
Tin Salts	E	E	E	E	E	E	E	E	E	E	E	E
Titanium Salts	E	E	E	E	E	E	E	E	E	X	E	E
Toluene	X	X	X	X	X	X	X	X	X	G	X	F
Trichloroacetic Acid, 90% in w	G	G	E	E	E	E	G	G	E	F	X	X
Trichloroethane	F	F	X	X	X	X	X	X	X	F	X	X
Triethanolamine	F	F	G	E	E	X	X	X	X	X	X	X
Trichloroethylene	X	X	X	X	X	X	X	X	X	F	X	X
Trichloropropane	F	F	X	X	X	X	X	X	X	E	F	X
Tricresyl Phosphate	E	E	F	F	F	G	E	E	E	E	F	E
Trisodium Phosphate	E	E	F	E	E	E	E	E	E	E	E	E
Turpentine	X	X	X	X	X	X	X	X	X	X	G	E
Urea, 20% in w	E	E	E	E	E	E	G	G	E	E	E	E
Uric Acid	E	E	E	E	E	E	G	G	E	E	F	F
Vinegar	E	E	E	E	E	E	E	E	E	E	E	X
Vinyl Acetate	G	G	X	X	X	X	X	X	X	G	X	X
Water, Deionized	E	E	E	E	E	E	E	E	E	E	E	E
Water, Distilled	E	E	E	E	E	E	E	E	E	E	E	E
Xylene	X	X	X	X	X	X	X	X	X	X	X	F
Zinc Chloride, 80% in w	E	E	E	E	E	E	E	E	E	E	E	E
Zinc Salts	E	E	E	E	E	E	E	E	E	E	E	E

The ratings on this chart are based on the results of laboratory tests. They reflect the relative capabilities of various Anko tubing formulations to withstand specific chemicals. **NOTE: The ratings in the charts DO NOT reflect the extent to which extraction may occur, or the extent to which fluids may undergo any physical changes in properties or composition, as a result of coming into contact with the tubing. Anko makes no representation or warranty with respect to the susceptibility of any fluid to become contaminated or undergo changes in properties or composition as a result of possible extraction of tubing ingredients by the fluid to be transmitted.** Certain corrosives that would be destructive to tubing or hose with prolonged exposure can be satisfactorily handled for short periods of time if flushed with water after use. All ratings are based on room temperature (73°F). Chemical resistance will be adversely affected by elevated temperatures. **IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Anko tubing for all intended uses, including establishing the compatibility of any fluid with the tubing through which it is transmitted. Laboratory, field or clinical tests must be conducted in accordance with applicable requirements in order to determine the safety and effectiveness for use of tubing or hose in any particular application. If intended for medical use, it is the user's responsibility to ensure that the tubing to be used complies with all applicable medical regulatory requirements.**