

Tubing formulations

PN : PharMed® BPT, High-Pressure, PharMed® BPT, PharmaPure®, Norprene®, Norprene® Food

CD : Chem-Durance® and Chem-Durance® Bio

CF : C-FLEX®

S : Silicone (peroxide/platinum-cured), BioPharm, BioPharm Plus, STA-PURE®

T : Tygon® Lab, Tygon® LFL, Tygon® Food

TU : Tygon® Fuel & Lubricant

TC : Tygon® Chemical

CS : CHEM-SURE®

V : Viton®

FP : Polytetrafluoroethylene (PTFE), Solve-Flex™, Solve-Flex™ Bio

Ratings -- Chemical Effect

A : Excellent.

B : Good -- Minor Effect, slight corrosion or discoloration.

C : Fair -- Moderate Effect, not recommended for continuous use.
Softening, loss of strength, swelling may occur.

D : Severe Effect, not recommended for ANY use.

N/A : Information Not Available.

* 사용할 용액이 산이라도 희석되어 농도가 낮은 경우 테스트용 튜브로 일정기간 담귀 놓고 확인해 볼수 있습니다. (상담 필요)

	PN	CF	S	T	TU	TC	CD	CS	V	FP
Acetate LMW	A	A	—	D	D	C	D	—	—	A
Acetic acid <5%	A	A	A	A	A	B	A	A	—	A
Acetic acid >5%	A	A	A	B	A	B	A	A	B	A
Acetic anhydride	A	B	C	D	D	A	A	A	D	A
Acetone	D	C	C	D	D	C	B	A	D	A
Acetonitrile	B	A	—	D	D	B	B	—	D	A
Acetyl bromide	C	A	—	D	D	C	D	—	—	A
Acetyl chloride	C	A	C	D	D	C	D	A	A	A
Air	A	A	A	A	A	A	A	A	A	A+
Aliphatic hydrocarbons	D	D	—	D	B	D	D	—	—	—
Aluminum chloride	A	A	B	A	A	A	A	—	A	A
Aluminum sulfate	A	A	A	A	A	A	A	—	A	A
Alums	A	A	A	A	A	A	A	—	A	A
Ammonia, gas / liquid	A	A	C	B	B	B	B	—	D	A
Ammonium acetate	A	A	—	A	A	A	A	A	D	A
Ammonium carbonate	A	A	C	A	A	A	A	A	A	A
Ammonium chloride	A	A	C	A	A	A	A	A	A	A
Ammonium hydroxide	A	A	A	B	C	A	A	A	B	A
Ammonium nitrate	A	A	C	A	A	A	A	A	A	A
Ammonium phosphate	A	A	A	A	A	A	A	A	A	A
Ammonium sulfate	A	A	A	A	A	A	A	A	A	A
Amyl acetate	B	D	D	D	D	D	D	B	D	A
Amyl alcohol	D	D	D	D	A	A	A	A	A	A
Amyl chloride	C	D	D	D	D	D	D	—	A	A
Aniline	C	B	D	D	D	D	D	A	B	A
Aniline hydrochloride	C	B	D	D	D	D	D	A	B	A
Aqua regia (80% HCl, 20% H)	D	—	D	D	D	A	A	—	B	A
Aromatic hydrocarbons	D	D	—	D	D	D	D	—	A	—
Arsenic salts	A	—	—	A	A	A	A	—	D	—
Barium salts	A	A	A	A	A	A	A	A	A	A
Benzaldehyde	D	D	B	D	D	C	C	A	D	A
Benzenesulfonic acid	D	A	D	D	D	D	D	A	A	A
Bleaching liquors	A	B	B	A	A	A	A	—	A	A
Boric acid	A	A	A	A	A	A	A	A	A	A
Bromine	D	A	D	D	D	D	D	—	A	A

Butane	A	D	D	A	A	B	B	B	A	A
Butanol (butyl alcohol)	D	B	B	D	A	A	A	A	A	A
Butyl acetate	B	D	D	D	D	D	D	B	D	A
Butyric acid	B	A	D	D	C	D	D	A	B	A
Calcium oxide	A	—	A	A	A	A	A	—	A	A
Calcium salts	A	A	B	A	A	A	A	A	A	A
Carbon bisulfide	D	D	D	D	D	D	D	—	—	A
Carbon dioxide	A	A	B	A	A	A	A	A	A	A+
Carbon tetrachloride	D	B	D	D	D	D	D	B	A	A
Chlorine, dry	C	A	D	A	A	C	C	—	A	A+
Chlorine, wet	D	A	D	B	A	C	C	—	B	A
Chloroacetic acid	B	A	—	A	D	A	A	B	D	A
Chlorobenzene	D	D	D	D	D	D	D	A	A	B
Chlorobromomethane	B	D	D	D	D	—	D	—	A	A
Chloroform	C	D	D	D	D	D	D	B	A	A
Chlorosulfonic acid	D	A	D	D	D	D	D	A	D	A
Chromic acid,30%	A	A	C	B	C	B	B	—	A	A
Chromium salts	A	A	—	A	A	A	A	—	—	—
Copper salts	A	A	A	A	A	A	A	—	A	A
Cresol	D	D	D	D	C	A	A	A	A	A
Cyclohexane	D	D	D	D	C	D	D	B	A	A
Cyclohexanone	D	D	D	D	D	C	C	—	D	A
Diacetone alcohol	A	A	B	D	D	A	A	A	D	A
Dimethyl formamide	B	B	B	D	D	A	A	A	D	A
Essential oils	D	B	C	D	C	D	D	—	—	—
Ethanol (ethyl alcohol)	C	B	A	D	B	A	A	A	A	A
Ether	C	D	D	D	C	D	D	B	D	A
Ethyl acetate	B	D	B	D	D	D	D	A	D	A
Ethyl bromide	D	A	D	D	D	C	D	—	A	A
Ethyl chloride	C	A	D	D	D	D	D	—	A	A
Ethylamine	D	A	C	D	D	B	B	B	D	—
Ethylene chlorohydrin	A	A	C	D	B	A	A	—	A	A
Ethylene dichloride	C	A	D	D	D	D	D	B	A	A
Ethylene glycol	A	B	A	A	A	A	A	A	A	A
Ethylene oxide	A	A	D	A	A	A	A	B	D	A
Fatty acids	C	B	C	B	B	C	C	A	A	A
Ferric chloride	A	A	B	A	A	A	A	—	A	A
Ferric sulfate	A	A	B	A	A	A	A	A	A	A
Ferrous chloride	A	A	C	A	A	A	A	—	A	A
Ferrous sulfate	A	A	C	A	A	A	A	A	A	A
Fluoboric acid	D	A	A	A	D	A	A	—	—	A
Fluoroborate salts	A	A	—	A	A	A	A	—	—	—
Fluosilicic acid	C	A	D	A	A	A	A	—	A	A
Formaldehyde	D	A	B	D	D	C	C	A	D	A
Formic acid,25%	A	A	B	A	C	A	A	A	D	A
Freon® TMS	D	C	—	D	D	A	A	D	—	A
Gasoline, high-aromatic	D	D	D	D	B	D	D	B	A	B
Gasoline, nonaromatic	D	D	D	D	B	D	D	B	A	A
Glucose	A	A	A	A	A	A	A	A	A	A
Glue, P.V.A.	A	A	A	A	A	—	A	—	A	A
Glycerin	A	B	A	A	A	A	A	—	A	A
Hydriodic acid	D	A	—	A	A	A	A	—	A	—
Hydrobromic acid, 30%	D	A	D	A	A	A	A	—	A	A
Hydrochloric acid(dil)	A	A	D	A	A	A	A	A	A	A
Hydrochloric acid(med)	B	A	D	A	D	A	A	A	A	A
Hydrochloric acid(conc)	—	B	D	A	D	A	A	A	A	A
Hydrochloric acid	A	A	C	A	A	A	A	A	A	A

Hydrochloric acid,gas,10%	A	A	C	A	A	A	A	—	A	A
Hydrochloric acid,50%	D	A	D	C	D	A	A	D	D	A
Hydrochloric acid,75%	—	A	D	D	D	—	C	D	D	A
Hydrogen peroxide (dil)	A	A	A	A	A	A	A	A	A	A
Hydrogen peroxide,90%	B	D	B	D	D	B	B	A	A	A
Hypochlorous acid	A	A	D	A	A	A	A	A	A	A
Iodine solutions	A	C	C	A	A	A	A	—	A	A
Iodoform	—	—	—	—	—	—	D	—	C	—
Kerosene	D	D	D	D	B	D	D	A	A	A
Ketones	D	B	—	D	D	C	C	—	—	A
Lacquer solvents	B	D	D	D	D	D	D	A	D	A
Lactic acid,3?10%	A	A	A	A	A	A	A	A	A	A
Lead acetate	A	A	D	A	A	A	A	—	D	A
Linseed oil	C	D	A	D	A	B	B	A	A	A
Lithium hydroxide	B	A	D	A	A	—	B	—	C	A
Magnesium chloride	A	A	A	A	A	A	A	A	A	A
Magnesium sulfate	A	A	A	A	A	A	A	A	A	A
Malic acid	A	A	B	A	A	A	A	A	A	A
Manganese salts	A	A	B	A	A	A	A	—	A	A
Mercury salts	A	A	—	A	A	A	A	—	A	A
Methane	A	D	D	A	A	A	A	B	A	A+
Methanol(methyl alcohol)	A	—	A	C	C	A	A	A	B	A
Methyl chloride	C	A	D	D	D	D	D	B	B	A
Methyl ethyl ketone(MEK)	D	—	D	D	D	C	C	B	D	A
Mixed acid(40% H2SO4,15% HNO3)	B	—	—	B	D	—	A	—	—	A
Molybdenum disulfide	—	A	—	—	—	—	A	—	A	—
Monoethanolamine	C	B	B	D	D	D	D	—	D	A
Naphtha	D	D	D	D	B	D	D	B	A	B
Natural gas	A	D	A	A	A	A	A	B	A	A+
Nickel salts	A	A	A	A	A	A	A	A	A	A
Nitric acid (dil)	A	A	B	A	D	A	A	A	B	A
Nitric acid (med)	A	—	C	A	D	A	A	A	A	A
Nitric acid (conc)	D	—	D	D	D	A	A	A	A	A
Nitrobenzene	D	D	D	D	D	D	D	A	B	A
Nitrogen oxides	A	A	D	A	A	A	A	—	D	A
Nitrous acid	A	A	—	A	C	A	A	—	—	A
Oils, animal	C	B	B	D	B	B	B	—	A	A
Oils, mineral	D	B	B	C	A	D	D	—	A	A
Oils, vegetable	C	B	B	D	A	B	B	A	A	A
Oleic acid	C	A	D	D	B	D	C	A	B	A
Oxalic acid,cold	B	A	B	B	D	A	A	A	A	A
Oxygen,gas	A	A	B	A	A	A	A	A	B	A+
Palmitic acid,100% in ether	C	—	D	D	B	C	C	A	A	A
Perchloric acid	A	A	D	C	D	A	A	A	A	A
Perchloroethylene	C	B	D	D	D	D	D	B	A	A
Phenol(carbolic acid)	A	D	D	B	C	A	A	A	A	A
Phosphoric acid,50%	A	A	C	A	A	A	A	A	A	A
Phthalic acid	A	D	B	D	A	A	A	—	B	A
Plating solutions	A	A	D	A	D	A	A	—	A	A
Polyglycol	B	B	A	A	A	—	B	—	A	—
Potassium carbonate	A	A	—	A	A	A	A	A	A	—
Potassium chlorate	B	A	B	A	A	—	A	A	A	A
Potassium hydroxide (med)	A	A	B	A	D	—	A	B	D	A
Potassium hydroxide (conc)	A	A	C	D	D	—	A	B	D	A
Potassium iodide	A	A	—	A	A	A	A	—	A	A
Propanol (propyl alcohol)	C	—	A	D	A	A	A	A	A	A
Pyridine	C	A	D	D	D	C	C	A	D	A

Silicone fluids	A	B	C	B	A	B	A	—	A	A
Silicone oils	C	B	C	B	A	B	A	—	A	A
Silver nitrate	A	A	A	A	A	A	A	A	A	A
Soap solutions	B	A	A	A	A	A	A	A	A	A
Sodium bicarbonate	A	A	A	A	A	A	A	A	A	A
Sodium bisulfate	A	A	—	A	A	A	A	A	A	A
Sodium bisulfite	A	A	A	A	A	—	A	A	A	A
Sodium borate	A	A	A	A	A	—	A	—	A	A
Sodium carbonate	A	A	A	A	A	A	A	A	A	A
Sodium chlorate	A	A	C	A	A	A	A	—	A	A
Sodium chloride	A	A	A	A	A	A	A	A	A	A
Sodium ferrocyanide	A	A	—	B	B	—	A	—	A	A
Sodium hydrosulfite	B	A	—	A	A	—	A	—	—	A
Sodium hydroxide (dil)	A	A	A	A	D	A	A	A	A	A
Sodium hydroxide,25%	A	B	B	C	D	A	A	—	A	A
Sodium hydroxide(conc)	—	C	—	C	D	A	A	—	A	A
Sodium hypochlorite, <5%	A	A	B	A	A	A	A	A	A	A
Sodium hypochlorite, >5%	A	A	B	A	A	A	A	A	A	A
Sodium nitrate	A	A	D	A	A	A	A	A	A	A
Sodium silicate	A	A	A	A	A	—	A	A	A	A
Sodium sulfide	A	A	A	A	A	A	A	A	A	A
Sodium sulfite	A	A	A	A	A	A	A	A	A	A
Steam, up to 40 psi	C	—	A	D	D	—	D	A	B	A+
Stearic acid	C	A	B	A	B	C	C	A	A	A
Styrene	D	D	D	D	D	D	D	A	A	A
Sulfuric acid(dil)	A	A	D	A	A	A	A	A	A	A
Sulfuric acid(med)	A	A	D	A	B	A	A	—	A	A
Sulfuric acid(conc)	D	A	D	D	D	D	A	C	A	A
Sulfurous acid	A	A	D	A	A	A	A	—	B	A
Tannic acid	B	A	B	B	D	A	A	—	A	A
Tanning liquors	A	B	—	A	A	A	A	—	—	A
Tartaric acid	A	A	A	A	A	A	A	A	A	A
Tin salts	A	A	B	A	A	A	A	—	—	A
Toluene (toluol)	D	D	D	D	D	D	D	A	A	A
Trichloroacetic acid	B	A	D	A	D	A	A	—	C	A
Trichloroethylene	D	D	D	D	D	D	D	B	A	A
Trisodium phosphate	A	A	—	A	A	A	A	—	A	A
Turpentine	D	D	D	D	B	D	D	A	A	A
Urea	A	A	B	A	A	A	A	A	—	A
Uric acid	A	A	—	A	C	A	A	—	—	A
Water, fresh	A	A	B	A	A	A	A	A	A	A
Water, salt	A	A	A	A	A	A	A	A	A	A
Xylene	D	D	D	D	D	D	D	A	A	A
Zinc chloride	A	A	A	A	A	A	A	A	A	A