

Material Recommendations

Fluid	Alum-ium	Cast Brass	Forged Brass	Ductile Iron	Stainless Steel	Polypropylene	Gasket
ACETIC ACID	X	-	-	-	X	X	BENTV
ACETIC ANHYDRIDE	X	-	-	-	X	X	BNT
ACETONE	X	-	-	X	X	X	BET
ACETYLENE-DRY	X	-	-	X	X	-	BENTV
AGRICULTURAL LIME SOLUTIONS	-	-	-	X	X	X	B
AIR	X	X	X	X	X	X	B
ALCOHOL-AMYL	-	X	X	X	X	X	BENTV
ALCOHOL-BUTYL	X	X	X	X	X	X	BETV
ALCOHOL-ETHYL	-	X	X	X	X	X	BENTV
ALCOHOL-ISOPROPYL	X	X	X	X	X	X	BETV
ALCOHOL-METHYL	-	X	X	X	X	X	BENT
ALUMINUM CHLORIDE	-	-	-	-	-	X	BENTV
ALUMINUM FLUORIDE, 20%	X	X	X	-	-	-	BENTV
ALUMINUM NITRATE	-	-	-	-	X	X	BENTV
ALUMINUM POTASSIUM SULFATE	X	-	-	-	X	X	BENTV
ALUMINUM SULFATE	-	-	-	-	X	X	BENTV
AMMONIA, ANHYDROUS (DRY)	X	-	-	-	X	X	BENT
AMMONIA, SOLUTIONS	X	-	-	-	X	X	BN
AMMONIUM CHLORIDE - DRY	-	-	-	-	-	X	BENTV
AMMONIUM HYDROXIDE	X	-	-	-	X	X	BENTV
AMMONIUM NITRATE	X	-	-	X	X	X	BENT
AMMONIUM PHOSPHATE	-	-	-	-	X	X	BENTV
MONO-BASIC	-	-	-	-	X	X	B
DI-BASIC OR TRI-BASIC	X	-	-	-	X	X	B
AMMONIUM SULFATE	-	-	-	X	X	X	BENTV
ANILINE	-	-	-	-	X	X	ETV
ARSENIC ACID	-	-	-	-	X	X	BENTV
ASPHALT	-	X	X	X	X	-	TV
BARIUM CHLORIDE	-	-	-	-	X	X	BENTV
BARIUM HYDROXIDE	-	-	-	-	X	X	BENTV
BARIUM SULFIDE	-	-	-	X	X	X	BENTV
BASIC SLAG	-	-	-	X	-	X	B
BEER	X	X	X	-	X	X	BENTV
BENZENE BENZOL	X	X	X	X	X	-	TV
BENZINE	X	X	X	X	X	-	B
BLACK LIQUOR (PAPER INDUSTRY)	-	-	-	X	-	X	BENTV
BLEACH (12.5% CHLORINE)	-	-	-	-	-	X	ENTV
BORAX	-	-	-	X	X	X	BENSTV
BORIC ACID	X	-	-	-	X	X	BENTV
BRINE	-	-	-	-	X	X	BENTV
BROMIC ACID	-	-	-	-	-	X	ENTV
BURNT LIME	X	X	X	X	X	X	B
BUTANE	X	X	X	X	X	-	BTV
BUTADIENE	X	X	X	-	X	-	BNSTV
BUTYLACETATE - DRY	X	X	X	X	X	-	ET
BUTYL STEARATE	X	X	X	X	X	-	B
BUTYLENE	X	X	X	X	X	-	B
CADMIUM CYANIDE	-	-	-	-	-	X	B
CALCIUM ACETATE	-	X	X	-	X	X	BE
CALCIUM BISULFITE	-	-	-	-	X	X	BNTV
CALCIUM CHLORIDE	-	-	-	-	-	X	BENTV
CALCIUM HYDROXIDE	-	X	X	X	X	X	BENTV
CALCIUM HYPOCHLORITE	-	-	-	-	-	X	ETV
CALCIUM NITRATE, 40%	X	-	-	X	X	X	B
CARBOLIC ACID (PHENOL)	-	-	-	-	X	-	TV
CARBON DIOXIDE - DRY	X	X	X	X	X	-	BENT
CARBON DISULFIDE	X	X	X	X	X	-	TV
CARBON TETRACHLORIDE	-	-	-	X	X	-	TV
CARBONATED BEVERAGES	X	-	-	-	X	X	N
CARBONIC ACID	X	-	-	-	X	X	BENTV
CASTOR OIL	-	-	-	-	X	X	BENTV
CAUSTIC POTASH	-	-	-	X	-	X	BENTV
CAUSTIC SODA	-	-	-	X	-	X	BENT
"CELLOSQUES"	X	X	X	X	X	-	ET
-METHYL	-	X	X	X	X	-	B
CHLORINE - DRY	-	-	-	-	-	-	NV
CHLOROBROMOMETHANE	-	X	X	-	X	-	V
CHLOROFORM - DRY	X	X	X	-	X	-	NTV
"CHLOREX"	-	X	X	-	-	-	N
CHROMIC ACID - 50%	-	-	-	X	X	X	BNTV
CITRIC ACID	-	-	-	-	X	X	BENT
COBALTZED SUPER COMPOUND	-	-	-	-	-	X	B

Fluid	Alum-ium	Cast Brass	Forged Brass	Ductile Iron	Stainless Steel	Polypropylene	Gasket
COPPER CHLORIDE - DRY	-	-	-	X	-	X	BENTV
COPPER SULFATE	-	-	-	-	X	X	BENTV
COPPERIZED SUPER COMPOUND	-	-	-	-	-	X	B
CORN OIL	-	-	-	-	X	X	BNTV
COTTONSEED OIL	X	-	-	-	X	X	BNTV
CRESOTE	X	X	X	X	X	-	V
CRESYLIC ACID	X	X	X	X	X	-	ETV
CYCLOHEXANE	X	X	X	X	X	-	BTV
DETERGENTS	-	-	-	-	X	X	BENTV
DEVELOPER SOLUTIONS	-	-	-	-	-	X	B
DEXTRIOSE	X	-	-	-	X	X	BENTV
DIESEL FUELS	X	X	X	X	X	X	BTV
DIETHYL SEBACATE	-	-	-	X	-	-	N
DISODIUM PHOSPHATE	-	-	-	-	-	X	BENT
DOWTHERM (DIPHENYL)	-	-	-	-	-	-	V
ETHANOLAMINE	X	-	-	X	X	X	BN
ETHER	X	X	X	-	X	-	BT
ETHYLACETATE	-	-	-	X	X	X	ET
ETHYL CHLORIDE - DRY	X	X	X	-	X	-	BENTV
ETHYLENE	-	X	X	X	X	-	B
ETHYLENE DICHLORIDE - DRY	X	X	X	X	X	-	TV
ETHYLENE GLYCOL	X	X	X	X	X	X	BENTV
FATTY ACIDS	-	-	-	-	X	X	BNTV
FERRIC CHLORIDE	-	-	-	-	-	X	BENTV
FERRIC HYDROXIDE	-	-	-	-	-	X	BENTV
FERRIC NITRATE	-	-	-	-	X	X	BENTV
FERRIC SULFATE	-	-	-	-	X	X	BENTV
FLUOBURIC ACID	-	-	-	-	-	X	BENTV
FORMALDEHYDE, 40%	X	-	-	-	X	X	ENT
FORMALIN	X	-	-	-	X	X	N
FORMIC ACID	X	-	-	-	X	X	ENT
FREON	X	-	-	X	X	X	BNTV
FRUIT JUICES: GRAPEFRUIT	-	-	-	-	X	X	BNTV
LEMON	-	-	-	-	X	X	BNTV
PINEAPPLE	-	-	-	-	X	X	BNTV
FURFURAL	X	X	X	X	X	-	ENT
GASOLINE - REFINED	X	X	X	X	X	-	BNTV
GASOLINE - SOUR	X	-	-	-	X	-	BNTV
GELATIN	X	-	-	-	X	X	BENTV
GLUCOSE	X	-	-	-	X	X	BENTV
GLUE	X	X	X	X	X	X	BENTV
GLYCERINE	X	X	X	X	X	X	BENTV
GLYCOL	-	-	-	-	-	X	BENTV
GREEN LIQUOR (PAPER INDUSTRY)	-	-	-	-	-	X	BENTV
HEXANE	X	X	X	X	X	-	BNTV
HYDROBROMIC ACID	-	-	-	-	-	X	ETV
HYDROBROMIC ACID, 40%	-	-	-	-	-	X	ETV
HYDROBROMIC ACID, 100%	-	-	-	-	-	X	V
HYDROCHLORIC ACID	-	-	-	-	-	X	ENTV
HYDROCYANIC ACID	X	-	-	-	X	X	ENTV
HYDROGEN CHLORIDE GAS - DRY	-	-	-	-	-	X	ENTV
HYDROGEN GAS	X	X	X	X	X	X	BENTV
HYDROGEN PEROXIDE	-	-	-	-	X	X	ETV
HYDROGEN SULFIDE	-	-	-	-	X	X	ET
"HYPO"	-	-	-	-	-	X	-
HYPOCHLOROUS ACID, 20%	-	-	-	-	-	X	ETV
ISOBUTYLACETATE	X	X	X	X	X	X	ET
ISOPROPYLACETATE	-	-	-	X	X	-	ET
JET FUEL	X	X	X	X	X	-	TV
KEROSENE	X	X	X	X	X	-	BNTV
KRAFT LIQUOR (PAPER INDUSTRY)	-	-	-	-	-	X	T
LACQUERS	X	X	X	-	X	-	BT
LACTIC ACID, 20%	-	-	-	-	X	X	ENTV
LACTIC ACID, 70%	-	-	-	-	X	X	ENTV
LARD	-	-	-	-	X	X	N
LEAD: CHLORIDE SULFATE	-	-	-	-	-	X	BNTV
LIME SLURRY	-	-	-	-	-	X	B
LIME SULPHUR	-	-	-	X	X	X	BENTV
LINOLEIC ACID	-	-	-	-	X	X	BSTV
LINSEED OIL	-	-	-	-	X	X	BNTV
LPG	X	X	X	X	X	-	B
MAGNESIUM CARBONATE	-	X	X	X	X	X	BENTV

Material Recommendations (Continued)

Fluid	Aluminum	Cast Brass	Forged Brass	Ductile Iron	Stainless Steel	Polypropylene	Gasket
MAGNESIUM CHLORIDE	-	-	-	-	X	X	BENTV
MAGNESIUM HYDROXIDE	-	X	X	X	X	X	BENTV
MAGNESIUM NITRATE	X	-	-	-	X	X	BENTV
MAGNESIUM SULFATE	X	-	-	-	X	X	BENTV
MERCURIC CHLORIDE	-	-	-	-	-	X	BETV
MERCURY	-	-	-	X	X	X	BENTV
METHANE	X	X	X	X	X	-	BENTV
METHANOL	X	X	X	X	X	X	BENT
METHYLAMYLACETATE	-	-	-	-	-	X	E
METHYLENE CHLORIDE	-	-	-	-	X	-	TV
METHYL BENZENE	X	X	X	X	X	-	V
METHYLETHYLKETONE	X	X	X	X	X	X	ENT
MILK	X	-	-	-	X	X	BENTV
MINERAL OIL	X	X	X	X	X	X	BNTV
MOLASSES	X	X	X	X	X	X	N
MURIATE OF POTASH	-	-	-	X	-	X	BENTV
MURIATIC ACID	-	-	-	-	-	X	TV
NAPHTHA	X	X	X	-	X	-	BTV
NAPHTHALENE	X	X	X	X	X	-	TV
NAPHTHIC ACID	-	X	X	X	X	-	B
NATURAL GAS	X	X	X	X	X	X	B
NICKEL CHLORIDE	-	-	-	-	X	X	BENTV
NICKEL SULFATE	-	-	-	-	X	X	BENTV
NITRIC ACID	-	-	-	-	X	X	TV
NITROBENZENE	X	-	-	X	X	-	ETV
NITRO LIME	-	-	-	-	-	X	B
OCTANE	X	X	X	X	X	-	V
OIL - CORE	-	X	X	X	X	-	B
OIL - FUEL	X	X	X	X	X	-	BNTV
OIL - HYDRAULIC	X	X	X	X	X	X	B
OIL - CRUDE	-	-	-	-	X	-	B
OIL - REFINED	X	X	X	X	X	-	B
OIL - TRANSMISSION	-	X	X	X	X	X	V
OIL - VEGETABLE	-	-	-	-	X	X	BNTV
OLIC ACID	-	-	-	X	X	X	BT
OLEUM	-	-	-	X	X	-	TV
OXALIC ACID	X	-	-	-	-	X	BETV
OXYGEN	X	X	X	X	X	X	BENTV
PALMITIC ACID	-	-	-	-	X	X	BTV
PARAFFIN	X	X	X	X	X	X	BNTV
PENTACHLOROPHENOL - DRY	-	-	-	-	-	-	T
PERCHLOROETHYLENE	-	-	-	X	X	-	TV
PHOSPHORIC ACID	-	-	-	-	X	X	ENTV
PHOTOGRAPHIC SOLUTIONS	-	-	-	-	-	X	BNTV
PHTHALIC ANHYDRIDE	X	X	X	X	X	X	ENTV
PICRIC ACID - MOLTEN	-	-	-	-	X	-	V
- AQUEOUS SOLUTION	-	-	-	-	X	X	V
PLATING SOLUTIONS, CHROME	-	-	-	-	-	X	ENTV
POTASSIUM ACETATE	-	X	X	X	X	X	BETV
POTASSIUM CHLORIDE	-	-	-	-	-	X	BENTV
POTASSIUM CYANIDE	-	-	-	-	X	X	BENTV
POTASSIUM DICHROMATE	X	X	X	X	X	X	BETV
POTASSIUM HYDROXIDE, 30%	-	-	-	-	X	X	BENT
POTASSIUM NITRATE	X	X	X	X	X	X	BENTV
POTASSIUM SULFATE	X	X	X	-	X	X	BENTV
PROPANE	X	X	X	X	X	-	BTV
PROPYLENE GLYCOL	X	X	X	X	-	X	BNTV
PROPYLENE OXIDE	-	-	-	-	X	-	ET
ROBIN	X	-	-	-	X	X	B
SALT WATER	-	X	X	-	X	X	B
SHELLAC	X	-	-	-	X	X	B
SILICONE FLUID	-	-	-	-	X	-	BE

Fluid	Aluminum	Cast Brass	Forged Brass	Ductile Iron	Stainless Steel	Polypropylene	Gasket
SILICONE OIL	-	-	-	-	X	X	BENTV
SILVER NITRATE	-	-	-	-	-	X	BENTV
SOAP SOLUTIONS	-	-	-	-	X	X	BENTV
SODA ASH	-	-	-	X	X	X	BENTV
SODIUM BICARBONATE	-	X	X	-	X	X	BENTV
SODIUM BISULFATE	-	-	-	-	X	X	BENTV
SODIUM BORATE	X	X	X	-	X	X	BENTV
SODIUM PERBORATE	-	-	-	-	X	X	BENTV
SODIUM CARBONATE	-	-	-	X	X	X	BENTV
SODIUM CHLORIDE	-	X	X	X	X	X	BENTV
SODIUM CYANIDE, 10%	-	-	-	X	X	X	BENTV
SODIUM DICHROMATE, 10%	-	-	-	-	-	X	ET
SODIUM HYDROXIDE, 40%	-	-	-	X	X	X	BENT
SODIUM HYPOCHLORITE, 20%	-	-	-	-	-	X	ETV
SODIUM METAPHOSPHATE	-	X	X	-	X	X	BENTV
SODIUM NITRATE	X	-	-	X	X	X	BENT
SODIUM PEROXIDE	-	-	-	X	X	X	BENTV
SODIUM PHOSPHATE - MONO-BASIC	-	X	X	X	X	X	B
SODIUM PHOSPHATE - DI-BASIC	-	X	X	X	X	X	B
SODIUM PHOSPHATE - TRI-BASIC	-	X	X	X	X	X	B
SODIUM SILICATE	-	X	X	X	X	X	BENTV
SODIUM SULFATE	-	X	X	-	X	X	BENTV
SODIUM SULFIDE	-	-	-	-	X	X	BENTV
SODIUM THIOSULFATE	-	-	-	-	X	X	BENTV
SOYBEAN OIL	-	-	-	-	X	X	BN
STANNIC CHLORIDE	-	-	-	-	-	X	BENTV
STANNOUS CHLORIDE, 15%	-	-	-	-	X	X	BENTV
STEAM	-	-	-	-	X	-	V
STEARIC ACID	-	-	-	-	X	X	BNTV
STODDARD SOLVENT	X	X	X	X	X	-	BTV
STYRENE	X	-	-	-	X	-	V
SUGAR LIQUORS - CANE	X	X	X	X	X	X	BENTV
SUGAR LIQUORS - BEET	X	-	-	X	X	X	BENTV
SULFATE LIQUORS	-	-	-	-	X	X	BNTV
SULPHATE LIQUORS	-	-	-	-	X	X	BNTV
SULFURIC ACID	-	-	-	-	-	X	TV
SULFUROUS ACID	-	-	-	-	X	X	TV
SUPER-PHOSPHATE	-	-	-	-	-	X	B
TANNIC ACID, 10%	-	-	-	-	X	X	BENTV
TAR - WOOD	X	X	X	X	X	X	B
TARTARIC ACID	-	-	-	-	X	X	BNTV
TITANIUM TETRACHLORIDE - DRY	-	-	-	-	X	X	TV
TOLUENE/TOLUOL	X	X	X	X	X	-	BTV
TETRACHLOROETHYLENE	-	-	-	-	X	-	V
TRICHLOROETHYLENE - DRY	-	X	X	X	X	-	TV
TRIETHANOLAMINE	X	-	-	X	X	X	BENTV
TRISODIUM PHOSPHATE	-	-	-	-	X	X	BNTV
UREA	X	-	-	-	X	X	BENTV
URINE	-	-	-	-	-	X	BENTV
VARNISH	X	-	-	-	X	-	BV
VINEGAR	X	-	-	-	X	X	ENTV
WATER - ACID MINE	-	-	-	-	X	X	BENTV
WATER - DEIONIZED	-	-	-	-	-	X	N
WATER - DEMINERALIZED	-	-	-	-	-	X	N
WATER - DISTILLED	X	-	-	-	X	X	BENTV
WATER - FRESH	X	X	X	-	X	X	B
WATER - SALT	-	X	X	-	X	X	BENTV
WHITE LIQUOR (PAPER INDUSTRY)	-	-	-	-	X	X	BENTV
WINE	-	-	-	-	X	X	BENTV
XYLENEXYLLOL	X	X	X	-	X	-	TV
ZINC CHLORIDE	-	-	-	-	-	X	BENTV
ZINC NITRATE SULPHATE	X	-	-	-	X	X	BENTV

Polypropylene not recommended for food service.

LEGEND:

X = Recommended; B = Buna; E = EPT/EPDM; N = Neoprene; S = Silicone; T = PTFE; V = Fluoroelastomer

Notes: (1) All recommendations for pure chemicals at normal temperature unless otherwise stated.

(2) Temperature, concentrations, impurities, and other chemicals present can affect chemical resistance. It is not possible to test in all chemicals and therefore some chemical resistance indicators are based on the manufacturer's best estimates known about various classes and the composition of various metallurgies and elastomers. Therefore, manufacturers do not certify results from a performance standpoint but state they should be used only as indicators of chemical resistance. APG assumes no responsibility whatsoever.

(3) The information contained in these tables was derived from several sources and is to be used as a general guide only. Metallurgies and elastomers suitable for any specific application rests solely by the end user. APG assumes no responsibility whatsoever.