

Chemical	Container Materials						Cap Liner Materials						Cap Materials				Septa and Stopper Materials					
	COC	Glass	HDPE	LDPE	PET	PP	Al Foil	LDPE	Poly-Vinyl	SBR	Silicone	Teflon	PBT	Phenolic	PP	Urea	Butyl Rubber	EPDM	Natural Rubber	Silicone	Teflon	Viton
acetic acid, glacial	A	A	A	B	A	A	A	B	B	C	B	A	C	A	A	D	B	B	B	B	A	A
acetone	A	A	D	D	C	B	A	D	D	D	B	A	D	A	B	A	B	A	B	B	A	D
acetonitrile	—	A	A	A	B	A	A	A	D	B	D	A	—	A	A	—	D	B	D	D	A	D
acrylonitrile	—	A	A	A	B	B	B	A	D	C	D	A	—	D	B	—	D	A	D	D	A	D
ammonium sulfide	—	A	A	A	—	A	D	A	A	B	A	A	—	A	A	C	A	A	A	A	A	C
benzene	D	A	D	D	C	D	B	D	D	D	D	A	A	A	D	A	D	D	D	D	A	A
bleach	—	A	A	B	C	B	D	B	A	D	B	A	C	D	B	—	A	A	D	B	A	A
boric acid	—	A	A	A	A	A	D	A	A	A	A	A	A	B	A	—	A	A	A	A	A	A
carbonic acid	—	A	A	A	—	A	B	A	A	B	A	A	—	—	A	—	A	A	A	A	A	A
chlorobenzene	D	A	C	D	B	C	A	D	D	D	D	A	B	A	C	B	D	D	D	D	A	A
chloroform	D	A	C	C	D	D	A	C	D	D	D	A	D	A	D	A	D	D	D	D	A	A
dichloromethane	D	A	C	D	D	C	D	D	D	D	D	A	D	C	C	B	D	D	D	D	A	B
diethylamine	—	A	C	D	—	B	A	D	D	B	B	A	—	—	B	—	B	B	B	B	A	C
dimethyl formamide	—	A	A	A	B	A	A	A	D	D	B	A	—	A	A	—	D	B	D	B	A	D
dimethyl sulfoxide (DMSO)	—	A	A	A	B	A	A	A	D	D	D	A	—	—	A	—	D	A	D	D	A	D
dioxane	—	A	B	B	A	D	D	B	D	D	D	A	B	A	D	—	B	B	D	D	A	D
ether	—	A	C	D	A	D	B	D	D	D	D	A	—	B	D	B	D	C	D	D	A	C
ethyl acetate	C	A	B	B	B	C	B	B	D	D	C	A	C	A	C	B	C	C	D	C	A	D
ethyl alcohol	A	A	A	A	A	A	B	A	B	A	B	A	A	B	A	A	A	A	A	B	A	A
ethylene glycol	A	A	A	A	A	A	B	A	A	A	A	A	A	B	A	B	A	A	A	A	A	A
formaldehyde	—	A	A	A	B	A	A	A	C	B	B	A	—	B	A	A	A	A	C	B	A	C
formic acid 50%	A	A	A	B	—	A	C	B	B	B	C	A	A	C	A	D	A	A	B	C	A	C
gasoline	D	A	C	D	B	C	A	D	D	D	D	A	A	B	C	A	D	D	D	D	A	A
glycerine	A	A	A	A	—	A	A	A	C	A	B	A	—	A	A	—	A	A	A	B	A	A
heptane	D	A	C	D	B	C	A	D	C	D	D	A	A	A	C	A	D	D	D	D	A	A
hexane	D	A	B	D	C	B	A	D	D	D	D	A	A	B	B	—	D	D	D	D	A	A
hydrochloric acid (HCL) 50%	A	A	A	A	B	A	D	A	B	D	D	A	C	A	A	D	A	D	D	D	A	A
hydrofluoric acid (HF) 50%	D	D	A	A	C	A	D	A	C	D	D	A	C	D	A	D	C	D	C	D	A	A
hydrogen peroxide 50%	—	B	A	A	B	A	A	A	C	C	B	A	B	D	A	D	B	B	B	B	A	A
iodine	B	A	C	D	A	C	A	D	C	B	A	A	—	—	C	—	B	B	D	A	A	A
isopropyl alcohol	A	A	A	A	A	A	A	A	B	B	A	A	A	A	A	—	A	A	A	A	A	A
methyl alcohol	A	A	A	A	B	A	A	A	C	A	A	A	B	B	A	A	A	A	A	A	A	D
methyl ethyl ketone (MEK)	—	A	D	D	B	B	A	D	D	D	D	A	C	A	B	—	A	B	D	D	A	D
methylene chloride	D	A	C	D	D	B	D	D	D	D	D	A	D	C	B	B	D	D	D	D	A	B
nitric acid 50%	B	A	C	B	C	C	D	B	B	D	D	A	C	B	C	D	C	D	C	D	A	B
pentane	D	A	C	C	—	D	A	C	D	D	D	A	—	—	D	—	D	D	D	D	A	A
perchloric acid 50%	—	B	B	B	B	B	D	B	D	D	D	B	—	—	B	—	B	B	D	D	B	A
phenol 50%	B	A	D	D	D	D	A	D	C	D	D	A	D	A	D	—	D	C	D	D	A	A
phosphoric acid 50%	A	A	A	A	B	A	B	A	B	D	D	A	B	B	A	D	B	B	D	D	A	A
picric acid	—	A	D	D	B	D	A	D	D	B	D	A	—	A	D	D	B	B	B	D	A	A
potassium hydroxide	A	D	A	A	D	A	D	A	A	B	C	A	C	D	A	—	A	A	B	C	A	B
sodium hydroxide 50%	B	D	A	B	D	A	D	B	C	A	B	A	C	D	A	C	A	A	A	B	A	B
sodium peroxide	—	A	B	B	—	B	C	B	A	B	D	A	—	B	B	D	A	A	B	D	A	A
sodium thiosulfate	—	A	A	A	B	A	A	A	A	B	A	A	—	A	A	B	A	A	B	A	A	A
sulfuric acid 50%	A	A	A	A	B	B	C	A	C	D	D	A	B	C	B	D	D	C	D	D	A	A
tetrahydrofuran (THF)	—	A	C	C	A	B	A	C	D	D	D	A	D	A	B	—	C	C	D	D	A	D
toluene	D	A	C	C	C	C	A	C	C	D	D	A	D	A	C	—	D	D	D	D	A	B
trifluoroacetic acid (TFA) 50%	—	A	A	A	B	A	—	A	A	—	D	—	—	—	A	—	—	A	—	D	—	—
vegetable oil	—	A	B	B	A	A	A	B	A	D	A	A	A	A	A	A	C	C	D	A	A	A
xylene	D	A	C	D	C	D	A	D	D	D	D	A	C	A	D	B	D	D	D	D	A	A

(Tests conducted at room temp)

A - Resistant **B** - Limited Resistance **C** - Poor Resistance **D** - Not Resistant **—** - Unknown

COC ...cyclic olefin copolymer **HDPE** ... high density polyethylene **LDPE** ... low density polyethylene **PET** ... polyethylene terephthalate **PP** ... polypropylene **Al Foil** ... aluminum foil
SBR ...styrene butadiene rubber **Teflon** ... (tetrafluoroethylene) **PBT** ... polybutylene terephthalate **Urea** ... urea **EPDM** ... ethylene propylene diene monomer **Viton** ... (fluoroelastomer)

Although the information in this chart was acquired from reputable sources, it should only be used as a guide in selecting a container and closure system. Because so many factors can affect the chemical resistance of a material, in-house testing under actual conditions should be performed. Wheaton Science Products accepts no responsibility for the accuracy of this data or for any consequences resulting from its use.