



Chemical compatibility of filter materials

The chemical compatibility depends on several parameters such as time, pressure, temperature and concentration. In most cases, CHROMAFIL® filters will have only short contact with a solvent. In these cases they may be used despite of limited compatibility.

For example, a PTFE filter with PP housing does not liberate any UV-detectable substances during filtration of 5 mL THF, although PP shows only limited resistance towards THF.

The following table lists the chemical compatibility of our CHROMAFIL® materials.

Solvent	Material											
	MV	CA	RC	PA	PTFE	H-PTFE	PVDF	PES	PET	GF	IC	PP
Acetaldehyde	-	-	+	○	+	+	+	+	+	+		○
Acetic acid, 100 %	-	-	-	-	+	+	+	+	+	+		+
Acetone	-	-	+	+	+	+	-	-	+	+		+
Acetonitrile	-	-	+	+	+	+	+	+	+	+		+
Ammonia, 25 %	-	-	○	-	+	+	+	+	○	+	-	+
Benzene	+	+	+	+	+	+	○	+	+	+		○
n-Butanol	+	+	+	○	+	+	+	+	+	+		+
Cyclohexane	+	+	+	○	+	+	+	+	+	+		+
Dichloromethane	+	-	+	-	+	+	+	-	+	+		-
Diethyl ether	○	○	+	+	+	+	+	+	+	+		○
Dimethylformamide	-	-	○	+	+	+	-	-	+	+		+
1,4-Dioxane	-	-	+	+	+	+	○	-	+	+		○
Ethanol	-	+	+	+	+	+	+	+	+	+		+
Ethyl acetate	-	-	+	+	+	+	+	+	+	+		○
Ethylene glycol	○	○	+	+	+	+	+	+	+	+		+
Formic acid, 100 %	+	-	○	-	+	+	+	+	○	+		+
Hydrochloric acid, 30 %	-	-	-	-	+	+	+	+	-	+	-	+
Methanol	-	-	+	+	+	+	+	+	+	+		+
Nitric acid, 65 %	-	-	-	-	○	+	○		○	+	-	-
Oxalic acid, 10 % aqueous	+	-	+	-	+	+	+		+	+		+
Petroleum ether	+	+	+	+	+	+	+	+	+	+		+
Phosphoric acid, 80 %	-	-	○	-	+	+	○		+	+	-	+
Potassium hydroxide, 1 mol/L	-	-	○	+	+	+	○	○	○	+	+	+
2-Propanol	+	+	+	+	+	+	+	+	+	+		+
Sodium hydroxide, 1 mol/L	-	-	○	+	+	+	○	○	○	○	+	+
Tetrachloromethane	+	-	+	+	+	+	○		+	+		○
Tetrahydrofuran	-	-	+	○	+	+	+	-	+	+		○
Toluene	+	-	+	+	+	+	+	+	+	+		○
Trichloroethene	+	+	+	○	+	+	+	○	+	+		○
Trichloromethane (chloroform)	+	-	+	-	+	+	+	-	+	+		-
Urea	+	+	+	+	+	+	+		+	+		+
Water	+	+	+	+	+	+	+	+	+	+	+	+
Xylene	+	+	+	+	+		○	○	+	+		○

Data not guaranteed.

+ resistant, - not resistant, ○ limited resistance

Material

Membranes

MV = cellulose mixed esters, CA = cellulose acetate, RC = regenerated cellulose, PA = polyamide, PTFE = polytetrafluoroethylene, H-PTFE = hydrophilized polytetrafluoroethylene, PVDF = polyvinylidene difluoride, PES = polyethersulfone, PET = polyester, GF = glass fiber, IC = special filter for ion chromatography

Housing material

PP = polypropylene