

ProMinent® Chemical Resistance List

Resistance of Materials Used in Liquid Ends to the Chemicals Most Frequently Used

The data apply to standard conditions (20 °C, 1,013 mbar).

s	= saturated solution in water
+	= resistant
+/o	= largely resistant
o	= conditionally resistant
-	= not resistant
n	= resistance not known
=>	= see
*	= For bonded connections, the resistance of the adhesive (e.g. Tangit) is to be considered. (Materials of the types 'o' and '-' are not recommended!)
**	= does not apply to glass fibre reinforced material

Concentration data are stated in weight percent, referred to aqueous solutions. If percentages are stated for the level of resistance, this level of resistance is only valid up to this concentration.

NOTE:

The elastomers **CSM (Hypalon®)** and **IIR (butyl rubber)** used as diaphragm materials in pulsation dampers have properties similar to **EPDM**.

PTFE is resistant to all chemicals in this list.

PTFE filled with carbon, however, is attacked by strong oxidants such as bromine (anhydrous) or concentrated acids (phosphoric acid, sulphuric acid, chromic acid).

The resistance of PVC-U adhesive joints with Tangit deviates from the list below with regard to the following chemicals:

Medium	Concentration range
Sulfochromic acid	≥ 70 % H ₂ SO ₄ + 5 % K ₂ Cr ₂ O ₇ /Na ₂ Cr ₂ O ₇
Chromic acid	≥ 10 % CrO ₃
Hydrochloric acid	≥ 25 % HCl
Hydrogen peroxide	≥ 5 % H ₂ O ₂
Hydrofluoric acid	≥ 0 % HF

Explanation of abbreviations used as column headings:

PMMA:	Polymethylmethacrylate (Acrylic) resistance
PVC:	Polyvinylchloride, rigid, (PVC-U) resistance
PP:	Polypropylene resistance
PVDF:	Polyvinylidene fluoride
1.4404:	Stainless steel 1.4404 & 1.4571 resistance
FKM:	Fluorine Rubber (e.g. Viton® A & B) resistance
EPDM:	Ethylene-Propylene-Dien-rubber resistance
PharMed®:	Pharmed® resistance
PE:	Polyethylene resistance
2.4819:	Hastelloy C-276 resistance
WPC:	water endangering class

Viton® is a registered trademark of DuPont Dow Elastomers

Water endangering classes (WGK):

1	= slightly hazardous to water
2	= hazardous to water
3	= severely hazardous to water
(X)	= No classification. Classification according to conclusion by analogy. To be used under reserve.

Safety data sheets

Safety data sheets on our products in a number of different languages are provided on our website.

www.prominent.com/MSDS



ProMinent® Chemical Resistance List

The data has been taken from relevant manufacturer's documentation and our own tests. Resistance of materials is also dependant on other factors, e.g. operating conditions, conditions of surfaces etc, and so this list must be treated as an initial guide only. It cannot claim to offer any guarantees. It should be taken into consideration in particular that usual dosing media are compounds, and their corrosiveness cannot be deducted simply by adding the corrosiveness of each single component. In such cases the chemical producers' data of the material compatibility are to be considered as a matter of prime importance for the material choice. A safety data sheet does not give this data and therefore cannot take the place of the technical documentation on the application.

Chemical	Formula	Conc	PMMA	PVC	PP	PVDF	1.4404	FKM	EPDM	PharMed®	PE	2.4819	WPC
Acetaldehyde	CH ₃ CHO	100%	-	-	o	-	+	-	+/-	-	+	+	2
Acetamide	CH ₃ CONH ₂	s	+	+	+	+	+	o	+	+/-	+	+	1
Acetic Acid	CH ₃ COOH	100%	-	50%	+	+	+	-	o	60%	70%	+	1
Acetic Anhydride	(CH ₃ CO) ₂ O	100%	-	-	o	-	+	-	+/-	+	o	+	1
Acetic Ether => Ethyl Acetate													
Acetone	CH ₃ COCH ₃	100%	-	-	+	-	+	-	+	-	+	+	1
Acetophenone	C ₆ H ₅ COCH ₃	100%	-	n	+	-	+	-	+	n	+	+	1
Acetyl Chloride	CH ₃ COCl	100%	-	+	n	-	o	+	-	o	n	+	1
Acetylacetone	CH ₃ COCH ₂ COCH ₃	100%	-	-	+	-	+	-	+	n	+	+	1
Acetylene Dichloride => Dichloro Ethylene													
Acetylene Tetrachloride => Tetrachloro Ethane													
Acrylonitril	CH ₂ =CH-CN	100%	-	-	+	+	+	-	-	-	+	+	3
Adipic Acid	HOOC(CH ₂) ₄ COOH	s	+	+	+	+	+	+	+	+/-	+	+	1
Allyl Alcohol	CH ₂ CHCH ₂ OH	96%	-	o	+	+	+	-	+	o	+	+/-	2
Aluminium Acetate	Al(CH ₃ COO) ₃	s	+	+	+	+	+	+	+	+	+	+/-	1
Aluminium Bromide	AlBr ₃	s	+	+	+	+	n	+	+	+	+	+	2
Aluminium Chloride	AlCl ₃	s	+	+	+	+	-	+	+	+	+	+	1
Aluminium Fluoride	AlF ₃	10%	+	+	+	+	-	+	+	+	+	+/-	1
Aluminium Hydroxide	Al(OH) ₃	s	+	+	+	+	+	+	+	+	+	+	1
Aluminium Nitrate	Al(NO ₃) ₃	s	+	+	+	+	+	+	+	+	+	+	1
Aluminium Phosphate	AlPO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Aluminium Sulphate	Al ₂ (SO ₄) ₃	s	+	+	+	+	+	+	+	+	+	+	1
Ammonium Acetate	CH ₃ COONH ₄	s	+	+/-	+	+	+	+	+	+	+	+	1
Ammonium Bicarbonate	NH ₄ HCO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Ammonium Carbonate	(NH ₄) ₂ CO ₃	40%	+	+	+	+	+	+	+	+	+	+	1
Ammonium Chloride	NH ₄ Cl	s	+	+	+	+	-	+	+	+	+	+/-	1
Ammonium Fluoride	NH ₄ F	s	+	o	+	+	o	+	+	+	+	+	1
Ammonium Hydroxide	"NH ₄ OH"	30%	+	+	+	+	+	-	+	+	+	+	2
(25 °C)													
Ammonium Nitrate	NH ₄ NO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Ammonium Oxalate	(COONH ₄) ₂ * H ₂ O	s	+	+	+	+	+	+	+	+	+	+	1
Ammonium Perchlorate	NH ₄ ClO ₄	10%	+	+	+	+	+	+	+	+	+	+	1
Ammonium Peroxodisulphate	(NH ₄) ₂ S ₂ O ₈	s	+	+	+	+	5%	+	+	+	+	5%	2
Ammonium Phosphate	(NH ₄) ₃ PO ₄	s	+	+	+	+	10%	+	+	+	+	10%	1
Ammonium Sulphate	(NH ₄) ₂ SO ₄	s	+	+	+	+	10%	+	+	+	+	10%	1
Ammonium Sulphide	(NH ₄) ₂ S	s	+	+	+	+	n	+	+	n	+	n	2
Ammoniumaluminium Sulphate	NH ₄ Al(SO ₄) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Amyl Alcohol	C ₅ H ₁₁ OH	100%	+	+	+	+	+	-	+	-	+	+	1
Aniline	C ₆ H ₅ NH ₂	100%	-	-	+	+	+	-	+/-	o	+	+	2
Aniline Hydrochloride	C ₆ H ₅ NH ₂ * HCl	s	n	+	+	+	-	+/-	+/-	o	+	+	2
Antimony Trichloride	SbCl ₃	s	+	+	+	+	-	+	+	+	+	n	2
Aqua Regia	3 HCl + HNO ₃	100%	-	+	-	+	-	-	o	-	-	-	2
Arsenic Acid	H ₃ AsO ₄	s	+	+	+	+	+	+	+	o	+	+	3
Barium Carbonate	BaCO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Barium Chloride	BaCl ₂	s	+	+	+	+	-	+	+	+	+	+	1
Barium Hydroxide	Ba(OH) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Barium Nitrate	Ba(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Barium Sulphate	BaSO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Barium Sulphide	BaS	s	+	+	+	+	+	+	+	+	+	+	(1)
Benzaldehyde	C ₆ H ₅ CHO	100%	-	-	+	-	+	+	+	-	o	+	1
Benzene	C ₆ H ₆	100%	-	-	o	+	+	o	-	-	o	+	3
Benzene Sulphonic Acid	C ₆ H ₅ SO ₃ H	10%	n	n	+	+	+	+	-	-	n	+	2
Benzoic Acid	C ₆ H ₅ COOH	s	+	+	+	+	+	+	+	+/-	+	+	1
Benzoyl Chloride	C ₆ H ₅ COCl	100%	-	n	o	n	o	+	+	n	o	+	2



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Benzyl Alcohol	C ₆ H ₅ CH ₂ OH	100%	-	-	+	+	+	+	-	+	+	+	1
Benzyl Benzoate	C ₆ H ₅ COOC ₇ H ₇	100%	-	-	+	o	+	+	-	-	+	+	2
Benzyl Chloride	C ₆ H ₅ CH ₂ Cl	90%	-	n	o	+	+	+	-	-	o	+	2
Bitter Salt => Magnesium Sulphate													
Bleach => Sodium Hypochlorite													
Blue Vitriol => Copper Sulphate													
Borax => Sodium Tetraborate													
Boric Acid	H ₃ BO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Brine		s	+	+/o	+	+	+/o	+	+	+	+	+	1
Bromine (dry)	Br ₂	100%	-	-	-	+	-	-	-	-	-	+	2
Bromine Water	Br ₂ + H ₂ O	s	-	+	-	+	-	-	-	n	-	n	(2)
Bromo Benzene	C ₆ H ₅ Br	100%	n	n	o	+	+	o	-	-	o	+	2
Bromochloro Methane	CH ₂ BrCl	100%	-	-	-	+	+	n	+/o	-	o	+	2
Bromochlorotrifluoro Ethane	HCClBrCF ₃	100%	-	-	o	+	+	+	-	+	o	+	(3)
Butanediol	HOC ₄ H ₈ OH	10%	n	+	+	+	+	o	+	+	+	+	1
Butanetriol	C ₄ H ₁₀ O ₃	s	+	+	+	+	+	o	+	+	+	+	1
Butanol	C ₄ H ₉ OH	100%	-	+	+	+	+	o	+/o	-	+	+	1
Butyl Acetate	C ₇ H ₁₃ O ₂	100%	-	-	+	+	+	-	-	+/o	+	+	1
Butyl Acetate	CH ₃ COOC ₄ H ₉	100%	-	-	o	+	+	-	+/o	+/o	-	+	1
Butyl Alcohol => Butanol													
Butyl Amine	C ₄ H ₉ NH ₂	100%	n	n	n	-	+	-	-	n	+	+	1
Butyl Benzoate	C ₆ H ₅ COOC ₄ H ₉	100%	-	-	o	n	+	+	+	-	o	+	2
Butyl Mercaptane	C ₄ H ₉ SH	100%	n	n	n	+	n	+	-	n	n	n	3
Butyl Oleate	C ₂₂ H ₄₂ O ₂	100%	n	n	n	+	+	+	+/o	n	n	+	1
Butyl Stearate	C ₂₂ H ₄₄ O ₂	100%	o	n	n	+	+	+	-	n	n	+	1
Butyraldehyde	C ₃ H ₇ CHO	100%	-	n	+	n	+	-	+/o	-	+	+	1
Butyric Acid	C ₃ H ₇ COOH	100%	5%	20%	+	+	+	+	+	+/o	+	+	1
Calcium Acetate	(CH ₃ COO) ₂ Ca	s	+	+	+	+	+	+	+	+	+	+	1
Calcium Bisulphite	Ca(HSO ₃) ₂	s	+	+	+	+	+	+	+	+	+	+	(1)
Calcium Carbonate	CaCO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Calcium Chloride	CaCl ₂	s	+	+	+	+	-	+	+	+	+	+	1
Calcium Cyanide	Ca(CN) ₂	s	+	+	+	+	n	+	+	+	+	n	3
Calcium Hydroxide	Ca(OH) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Calcium Hypochlorite	Ca(OCl) ₂	s	+	+	o	+	-	o	+	+	+	+	2
Calcium Nitrate	Ca(NO ₃) ₂	s	+	50%	50%	+	+	+	+	+	+	+	1
Calcium Phosphate	Ca ₃ (PO ₄) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Calcium Sulphate	CaSO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Calcium Sulphide	CaS	s	+	+	+	+	n	+	+	+	+	+	(2)
Calcium Sulphite	CaSO ₃	s	+	+	+	+	+	+	+	+	+	+	(1)
Calcium Thiosulphate	CaS ₂ O ₃	s	+	+	+	+	-	+	+	+	+	+	1
Carbolic Acid => Phenole													
Carbon Disulphide	CS ₂	100%	-	-	o	+	+	+	-	-	o	+	2
Carbon Tetrachloride	CCl ₄	100%	-	-	-	+	+	+	-	-	o	+	3
Carbonic Acid	"H ₂ CO ₃ "	s	+	+	+	+	+	+	+	+	+	+	1
Caustic Potash => Potassium Hydroxide													
Caustic Soda => Sodium Hydroxide													
Chloric Acid	HClO ₃	20%	+	+	-	+	-	o	o	+	10%	+	2
Chlorinated Lime => Calcium Hypochlorite													
Chlorine Dioxide Solution	ClO ₂ + H ₂ O	0.5%	o	+	o	+	-	o	-	-	o	+	
Chlorine Water	Cl ₂ + H ₂ O	s	+	+	o	+	-	+	+	-	o	+	
Chloro Benzene	C ₆ H ₅ Cl	100%	-	-	+	+	+	+	-	-	o	+	2
Chloro Ethanol	ClCH ₂ CH ₂ OH	100%	-	-	+	o	+	-	o	+	+	+	3
Chloro Ethylbenzene	C ₆ H ₄ ClC ₂ H ₅	100%	-	-	o	n	+	o	-	-	o	+	(2)
Chloro Phenole	C ₆ H ₄ OHCl	100%	-	n	+	+	+	n	-	-	+	+	2
Chloro Toluene	C ₇ H ₈ Cl	100%	-	-	n	+	+	+	-	-	n	+	2
Chloroacetone	ClCH ₂ COCH ₃	100%	-	-	n	n	+	-	+	-	n	+	3
Chlorobutadiene	C ₄ H ₅ Cl	100%	-	-	n	n	+	+	-	-	n	+	1
Chloroform	CHCl ₃	100%	-	-	o	+	+	+	-	o	-	+	2
Chlorohydrin	C ₃ H ₅ OCl	100%	-	n	+	-	+	+	o	+	+	+	3
Chloroprene => Chlorobutadiene													
Chlorosulphonic Acid	SO ₂ (OH)Cl	100%	-	o	-	+	-	-	-	-	-	o	1
Chrome-alum => Potassium Chrome Sulphate													
Chromic Acid	H ₂ CrO ₄	50%	-	+	o	+	10%	+	-	o	+	10%	3



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Chromic-Sulphuric Acid	$K_2CrO_4 + H_2SO_4$	s	-	+*	-	+	n	n	n	-	-	n	3
Chromium Sulphate	$Cr_2(SO_4)_3$	s	+	+	+	+	+	+	+	+	+	+	1
Citric Acid	$C_6H_8O_7$	s	+	+	+	+	+	+	+	+	+	+	1
Cobalt Chloride	$CoCl_2$	s	+	+	+	+	-	+	+	+	+	+	2
Copper-II-Acetate	$Cu(CH_3COO)_2$	s	+	+	+	+	+	+	+	+	+	+	3
Copper-II-Arsenite	$Cu_3(AsO_3)_2$	s	+	+	+	+	+	+	+	+	+	+	3
Copper-II-Carbonate	$CuCO_3$	s	+	+	+	+	+	+	+	+	+	+	2
Copper-II-Chloride	$CuCl_2$	s	+	+	+	+	1%	+	+	+	+	+	2
Copper-II-Cyanide	$Cu(CN)_2$	s	+	+	+	+	+	+	+	+	+	+	(3)
Copper-II-Fluoride	CuF_2	s	+	+	+	+	+	+	+	+	+	+	(2)
Copper-II-Nitrate	$Cu(NO_3)_2$	s	+	+	+	+	+	+	+	+	+	+/o	2
Copper-II-Sulphate	$CuSO_4$	s	+	+	+	+	+	+	+	+	+	+	2
Cresols	$C_6H_4CH_3OH$	100%	o	o	+	+	+	+	-	-	+	+	2
Crotonaldehyde	$CH_3C_2H_2CHO$	100%	n	-	+	+	+	-	+	-	+	+	3
Cubic Nitre => Sodium Nitrate													
Cumene => Isopropyl Benzene													
Cyclo Hexane	C_6H_{12}	100%	+	-	+	+	+	+	-	-	+	o	1
Cyclohexanole	$C_6H_{11}OH$	100%	o	+/o	+	+	+	+	-	-	+	+	1
Cyclohexanone	$C_6H_{10}O$	100%	-	-	+	-	+	-	+/o	-	+	+	1
Cyclohexyl Alcohol => Cyclohexanol													
Cyclohexylamine	$C_6H_{11}NH_2$	100%	n	n	n	n	+	-	n	n	n	+	2
Decahydronaphthaline	$C_{10}H_{18}$	100%	-	+/o	o	+	n	o	-	-	o	+	2
Decaline => Decahydronaphthalene													
Dextrose => Glucose													
Diacetonolcohol	$C_6H_{12}O_2$	100%	-	-	+	o	+	-	+	-	+	+	1
Dibromoethane	$C_2H_4Br_2$	100%	-	-	n	+	+	+	-	-	-	+	3
Dibutyl Ether	$C_4H_9OC_4H_9$	100%	-	-	+	+	+	-	o	-	+	+	2
Dibutyl Phthalate	$C_{16}H_{22}O_4$	100%	-	-	+	+	+	+	+/o	+	o	+	2
Dibutylamine	$(C_4H_9)_2NH$	100%	n	n	+	+	+	-	-	n	+	+	1
Dichloro Acetic Acid	$Cl_2CHCOOH$	100%	-	+	+	+	+	-	+	o	+	+	1
Dichloro Benzene	$C_6H_4Cl_2$	100%	-	-	o	+	+	+	-	-	o	+	2
Dichloro Butan	$C_4H_8Cl_2$	100%	-	-	o	+	+	+	-	-	o	+	3
Dichloro Butene	$C_4H_6Cl_2$	100%	-	-	o	+	+	o	-	-	o	+	3
Dichloro Ethane	$C_2H_4Cl_2$	100%	-	-	o	+	+	+	-	o	-	+	3
Dichloro Ethylene	$C_2H_2Cl_2$	100%	-	-	o	+	+	o	-	o	-	+	2
Dichloro Methane	CH_2Cl_2	100%	-	-	o	o	o	+	-	o	-	+	2
Dichloroisopropyl Ether	$(C_3H_6Cl)_2O$	100%	-	-	o	n	+	o	o	-	o	+	(2)
Dicyclohexylamine	$(C_6H_{12})_2NH$	100%	-	-	o	n	+	-	-	-	o	+	2
Diethyleneglycol	$C_4H_{10}O_3$	s	+	+	+	+	+	+	+	+	+	+	1
Diethyleneglycolethyl Ether	$C_8H_{18}O_3$	100%	n	n	+	+	+	n	+/o	o	+	+	1
Diethylether	$C_2H_5OC_2H_5$	100%	-	-	o	+	+	-	-	o	o	+	1
Diglycolic Acid	$C_4H_6O_5$	30%	+	+	+	+	+	+	n	+/o	+	+	3
Dihexyl Phthalate	$C_{20}H_{26}O_4$	100%	-	-	+	+	+	-	n	+	+	+	(1)
Diisobutylketone	$C_9H_{18}O$	100%	-	-	+	+	+	-	+	-	+	+	1
Di-iso-nonyl Phthalate	$C_{26}H_{42}O_4$	100%	-	-	+	+	+	n	n	+	+	+	1
Diisopropylketone	$C_7H_{14}O$	100%	-	-	+	+	+	-	+	-	+	+	1
Dimethyl Carbonate	$(CH_3O)_2CO$	100%	n	n	+	+	+	+	-	n	+	+	1
Dimethyl Ketone => Acetone													
Dimethyl Phthalate	$C_{10}H_{10}O_4$	100%	-	-	+	+	+	-	+/o	+	+	+	1
Dimethylformamide	$HCON(CH_3)_2$	100%	-	-	+	-	+	-	+	+/o	+	+	1
Dimethylhydrazine	$H_2NN(CH_3)_2$	100%	n	n	+	n	+	-	+	n	+	+	3
Diocetyl Phthalate	$C_4H_4(COOC_8H_{17})_2$	100%	-	-	+	+	+	-	+/o	+	+	+	1
Dioxane	$C_4H_8O_2$	100%	-	-	o	-	+	-	+/o	-	+	+	1
Disodium Hydrogenphosphate	Na_2HPO_4	s	+	+	+	+	+	+	+	+	+	+	1
Disulfur Acid -- Oleum													
Disulphur Dichloride	S_2Cl_2	100%	n	n	n	+	n	+	-	-	n	n	
DMF => Dimethylformamide													
Engine Oils		100 %	n	+/o	+	+	+	+	-	-	+	+	2
Epsom salts => Magnesium Sulphate													
Ethanol	C_2H_5OH	100%	-	+	+	+	+	-	+	+	+	+	1
Ethanol Amine	$HOC_2H_4NH_2$	100%	o	n	+	-	+	-	+/o	o	+	+	1
Ethyl Acetate	$CH_3COOC_2H_5$	100%	-	-	35%	+	+	-	+/o	+/o	+	+	1
Ethyl Acrylate	$C_2H_3COOC_2H_5$	100%	-	-	+	o	+	-	+/o	-	+	+	2



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Chemical	Formula	Conc	PMMA	PVC	PP	PVDF	1.4404	FKM	EPDM	PharMed®	PE	2.4819	WPC
Ethyl Benzene	C ₆ H ₅ -C ₂ H ₅	100%	-	-	o	+	+	o	-	-	o	+	1
Ethyl Benzoate	C ₆ H ₅ COOC ₂ H ₅	100%	n	-	+	o	+	+	-	-	+	+	1
Ethyl Bromide	C ₂ H ₅ Br	100%	-	n	+	+	n	+	-	o	+	+	2
Ethyl Chloroacetate	ClCH ₂ COOC ₂ H ₅	100%	-	o	+	+	+	+	-	-	+	+	2
Ethyl Chlorocarbonate	ClCO ₂ C ₂ H ₅	100%	n	n	n	n	n	+	-	n	n	n	(2)
Ethyl Cyclopentane	C ₅ H ₄ C ₂ H ₅	100%	+	+	+	+	+	+	-	-	+	+	(1)
Ethylacetoacetate	C ₆ H ₁₀ O ₃	100%	n	-	+	+	+	-	+/o	+/o	+	+	1
Ethylacrylic Acid	C ₄ H ₇ COOH	100%	n	n	+	+	+	n	+/o	n	+	+	(1)
Ethylene Diamine	(CH ₂ NH ₂) ₂	100%	o	o	+	-	o	-	+	n	+	o	2
Ethylene Dibromide => Dibromoethane													
Ethylene Dichloride => Dichloro Ethane													
Ethylene Glycol => Glycol													
Ethylenglycol Ethylether	HOC ₂ H ₄ OC ₂ H ₅	100%	n	n	+	+	+	n	+/o	o	+	+	1
Ethylhexanol	C ₈ H ₁₆ O	100%	n	+/o	+	+	+	+	+	-	+	+	2
Fatty Acids	R-COOH	100%	+	+	+	+	+	+	o	o	+	+	1
Ferric Chloride	FeCl ₃	s	+	+	+	+	-	+	+	+	+	+/o	1
Ferric Nitrate	Fe(NO ₃) ₃	s	+	+	+	+	+	+	+	+	+	+	1
Ferric Phosphate	FePO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Ferric Sulphate	Fe ₂ (SO ₄) ₃	s	+	+	+	+	o	+	+	+	+	+	1
Ferrous Chloride	FeCl ₂	s	+	+	+	+	-	+	+	+	+	+/o	1
Ferrous Sulphate	FeSO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Fixing Salt => Sodium Thiosulphate													
Fluoro Benzene	C ₆ H ₅ F	100%	-	-	+	+	+	o	-	-	o	+	2
Fluoroboric Acid	HF ₄	35%	+	+	+	+	o	+	+	-	+	+	1
Fluorosilicic Acid	H ₂ SiF ₆	100%	+	30%	30%	+	o	+	+	o	40%	+/o	2
Formaldehyde	CH ₂ O	40%	+	+	+	+	+	-	+/o	-	+	+	2
Formalin => Formaldehyde													
Formamide	HCONH ₂	100%	+	-	+	+	+	+	+	n	+	+	1
Formic Acid	HCOOH	s	-	+/o	+	+	+	-	-	+/o	+	+	1
Furane	C ₄ H ₄ O	100%	-	-	+	-	+	-	n	-	+	+	3
Furane Aldehyde	C ₆ H ₅ O ₂	100%	n	n	n	o	+	-	+/o	-	n	n	2
Furfuryl Alcohol	OC ₄ H ₃ CH ₂ OH	100%	-	-	+	o	+	n	+/o	-	+	+	1
Gallic Acid	C ₆ H ₂ (OH) ₃ COOH	5%	+	+	+	+	+	+	+/o	+	+	+	1
Gasoline		100 %	-	-	+	+	+	+	-	-	+	+	2
Glauber's Salt => Sodium Sulphate													
Glucose	C ₆ H ₁₂ O ₆	s	+	+	+	+	+	+	+	+	+	+	1
Glycerol	C ₃ H ₅ (OH) ₃	100%	+	+	+	+	+	+	+	+	+	+	1
Glycerol Triacetate	C ₃ H ₅ (CH ₃ COO) ₃	100%	n	n	+	+	+	-	+	n	+	+	1
Glycine	NH ₂ CH ₂ COOH	10%	+	+	+	+	+	+	+	+	+	+	1
Glycol	C ₂ H ₄ (OH) ₂	100%	+	+	+	+	+	+	+	+	+	+	1
Glycolic Acid	CH ₂ OHCOOH	70%	+	37%	+	+	+	+	+	+/o	+	+	1
Gypsum => Calcium Sulphate													
Heptane	C ₇ H ₁₆	100%	+	+	+	+	+	+	-	-	+	+	1
Hexachloroplatinic Acid	H ₂ PtCl ₆	s	n	+	+	+	-	n	+	n	+	-	
Hexanal	C ₅ H ₁₁ CHO	100%	n	n	+	+	+	-	+/o	-	+	+	1
Hexane	C ₆ H ₁₄	100%	+	+	+	+	+	+	-	-	+	+	1
Hexanol	C ₆ H ₁₃ OH	100%	-	-	+	+	+	n	+	o	+	+	1
Hexantriol	C ₆ H ₉ (OH) ₃	100%	n	n	+	+	+	+	+	n	+	+	1
Hexene	C ₆ H ₁₂	100%	n	+	+	+	+	+	-	-	+	+	1
Hydrazine Hydrate	N ₂ H ₄ * H ₂ O	s	+	+	+	+	+	n	+	o	+	+	3
Hydrobromic Acid	HBr	50%	+	+	+	+	-	-	+	-	+	o	1
Hydrochloric Acid	HCl	38%	32%	+	+	+	-	+	o	o	+	o	1
Hydrofluoric Acid	HF	80%	-	40%	40%	+	-	+	o	-	40%	+/o	1
Hydrogen Cyanide	HCN	s	+	+	+	+	+	+	+	+	+	+	3
Hydrogen Peroxide	H ₂ O ₂	90%	40%	40%*	30%	+	+	30%	30%	+	+	+	1
Hydroiodic Acid	HI	s	+	+	+	+	-	-	n	-	+	n	1
Hydroquinone	C ₆ H ₄ (OH) ₂	s	o	+	+	+	+	+	-	+/o	+	+	2
Hydroxylamine Sulphate	(NH ₂ OH) ₂ * H ₂ SO ₄	10%	+	+	+	+	+	+	+	+	+	+	2
Hypochlorous Acid	HOCl	s	+	+	o	+	-	+	+/o	+	o	+	(1)
Iodine	I ₂	s	o	-	+	+	-	+	+/o	+	o	+/o	
Iron Vitriol => Ferrous Sulphate													
Isobutanol => Isobutyl Alcohol													
Isobutyl Alcohol	C ₂ H ₅ CH(OH)CH ₃	100%	-	+	+	+	+	+	+	o	+	+	1



ProMinent® Chemical Resistance List

Chemical	Formula	Conc	PMMA	PVC	PP	PVDF	1.4404	FKM	EPDM	PharMed®	PE	2.4819	WPC
Isopropanol => Isopropyl Alcohol													
Isopropyl Acetate	CH ₃ COOCH(CH ₃) ₂	100%	-	-	+	+	+	-	+/o	+/o	+	+	1
Isopropyl Alcohol	(CH ₃) ₂ CHOH	100%	-	+/o	+	+	+	+	+	o	+	+	1
Isopropyl Benzene	C ₆ H ₅ CH(CH ₃) ₂	100%	-	-	o	+	+	+	-	-	o	+	1
Isopropyl Chloride	CH ₃ CHClCH ₃	80%	-	-	o	+	+	+	-	o	o	+/o	2
Isopropyl Ether	C ₆ H ₁₄ O	100%	-	-	o	+	+	-	-	o	o	+	1
Kitchen Salt => Sodium Chloride													
Lactic Acid	C ₃ H ₆ O ₃	100%	-	+	+	+	+/o	+	10%	+/o	+	+	1
Lead Acetate	Pb(CH ₃ COO) ₂	s	+	+	+	+	+	+	+	+	+	+	2
Lead Nitrate	Pb(NO ₃) ₂	50%	+	+	+	+	+	+	+	+	+	+	2
Lead Sugar => Lead Acetate													
Lead Sulphate	PbSO ₄	s	+	+	+	+	+	+	+	+	+	+	(2)
Lead Tetraethyl	Pb(C ₂ H ₅) ₄	100%	+	+	+	+	+	+	-	n	+	+	3
Lime Milk => Calcium Hydroxide													
Liquid Ammonia => Ammonium Hydroxide													
Lithium Bromide	LiBr	s	+	+	+	+	+	+	+	+	+	+	1
Lithium Chloride	LiCl	s	+	+	+	+	-	+	+	+	+	n	1
Lunar Caustic => Silver Nitrate													
Magnesium Carbonate	MgCO ₃	s	+	+	+	+	+	+	+	+	+	+/o	1
Magnesium Chloride	MgCl ₂	s	+	+	+	+	o	+	+	+	+	+	1
Magnesium Hydroxide	Mg(OH) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Magnesium Nitrate	Mg(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Magnesium Sulphate	MgSO ₄	s	+	+	+	+	+	+	+	+	+	+/o	1
Maleic Acid	C ₄ H ₄ O ₄	s	+	+	+	+	+	+	+	o	+	+	1
Malic Acid	C ₄ H ₆ O ₅	s	+	+	+	+	+	+	+	+	+	+	1
Manganese-II-Chloride	MnCl ₂	s	+	+	+	+	-	+	+	+	+	+	1
Manganese-II-Sulphate	MnSO ₄	s	+	+	+	+	+	+	+	+	+	+	1
MEK => Methyl Ethyl Ketone													
Mercury	Hg	100%	+	+	+	+	+	+	+	+	+	+	3
Mercury-II-Chloride	HgCl ₂	s	+	+	+	+	-	+	+	+	+	+	3
Mercury-II-Cyanide	Hg(CN) ₂	s	+	+	+	+	+	+	+	+	+	+	3
Mercury-II-Nitrate	Hg(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+	+	3
Mesityl Oxide	C ₆ H ₁₀ O	100%	-	-	n	n	+	-	+/o	-	n	+	1
Methacrylic Acid	C ₃ H ₅ COOH	100%	n	n	+	+	+	o	+/o	+/o	+	+	1
Methanol	CH ₃ OH	100%	-	-	+	+	+	o	+	+/o	+	+	1
Methoxybutanol	CH ₃ O(CH ₂) ₄ OH	100%	-	-	+	+	+	+	o	o	+	+	(1)
Methyl Acetate	CH ₃ COOCH ₃	60%	-	-	+	+	+	-	+/o	+/o	+	+	2
Methyl Acrylate	C ₂ H ₃ COOCH ₃	100%	-	-	+	+	+	-	+/o	o	+	+	2
Methyl Benzoate	C ₆ H ₅ COOCH ₃	100%	-	-	+	o	+	+	-	-	+	+	2
Methyl Catechol	C ₆ H ₃ (OH) ₂ CH ₃	s	+	+	+	+	+	+	-	+o	+	+	(1)
Methyl Cellulose		s	+	+	+	+	+	+	+	+	+	+	1
Methyl Chloroacetate	ClCH ₂ COOCH ₃	100%	-	o	+	+	+	o	-	-	+	+	2
Methyl Cyclopentane	C ₅ H ₉ CH ₃	100%	+	+	+	+	+	+	-	-	+	+	(1)
Methyl Dichloroacetate	Cl ₂ CHCOOCH ₃	100%	-	-	+	n	+	-	n	-	+	+	2
Methyl Ethyl Ketone	CH ₃ COC ₂ H ₅	100%	-	-	+	-	+	-	+	-	+	+	1
Methyl Glycol	C ₃ H ₈ O ₂	100%	+	+	+	+	+	-	+/o	+	+	+	1
Methyl Isobutyl Ketone	CH ₃ COC ₄ H ₉	100%	-	-	+	-	+	-	o	-	+	+	1
Methyl Isopropyl Ketone	CH ₃ COC ₃ H ₇	100%	-	-	+	-	+	-	+/o	-	+	+	1
Methyl Methacrylate	C ₃ H ₅ COOCH ₃	100%	-	-	+	+	+	-	-	-	+	+	1
Methyl Oleate	C ₁₇ H ₃₃ COOCH ₃	100%	n	n	+	+	+	+	+/o	n	+	+	1
Methyl Salicylate	HOC ₆ H ₄ COOCH ₃	100%	-	-	+	+	+	n	+/o	-	+	+	1
Methylacetyl Acetate	C ₅ H ₈ O ₃	100%	-	-	+	+	+	-	+/o	o	+	+	2
Methylamine	CH ₃ NH ₂	32%	+	o	+	o	+	-	+	+	+	+	2
Methylene Chloride => Dichloro Methane													
Mirabilite => Sodium Sulphate													
Morpholine	C ₄ H ₉ ON	100%	-	-	+	-	+	n	n	-	+	+	2
Muriatic Acid => Hydrochloric Acid													
Natron => Sodium Bicarbonate													
Nickel-II-Acetate	(CH ₃ COO) ₂ Ni	s	+	+	+	+	+	-	+	+	+	+	(2)
Nickel-II-Chloride	NiCl ₂	s	+	+	+	+	-	+	+	+	+	+	2
Nickel-II-Nitrate	Ni(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+	+/o	2
Nickel-II-Sulphate	NiSO ₄	s	+	+	+	+	+	+	+	+	+	+/o	2
Nitrate of Lime => Calcium Nitrate													



ProMinent® Chemical Resistance List

Chemical	Formula	Conc	PMMA	PVC	PP	PVDF	1.4404	FKM	EPDM	PharMed®	PE	2.4819	WPC
Nitric Acid	HNO ₃	99%	10%	10%*	50%	65%	50%	65%	10%	35%	50%	65%	1
Nitro Methane	CH ₃ NO ₂	100%	-	-	+	o	+	-	+/o	-	+	+	2
Nitro Propane	(CH ₃) ₂ CHNO ₂	100%	-	-	+	n	+	-	+/o	-	+	+	2
Nitro Toluene	C ₆ H ₄ NO ₂ CH ₃	100%	-	-	+	+	+	o	-	-	+	+	2
Octane	C ₈ H ₁₈	100%	o	+	+	+	+	+	-	-	+	+	1
Octanol	C ₈ H ₁₇ OH	100%	-	-	+	+	+	+	-	-	+	+	1
Octyl Cresol	C ₁₅ H ₂₄ O	100%	-	-	+	+	+	o	n	-	+	+	(1)
Oil => Engine Oils													
Oleum	H ₂ SO ₄ + SO ₃	s	n	-	-	-	+	+	-	+	-	+	2
Orthophosphoric Acid => Phosphoric Acid													
Oxalic Acid	(COOH) ₂	s	+	+	+	+	10%	+	+	+/o	+	+/o	1
Pentane	C ₅ H ₁₂	100%	+	+	+	+	+	+	-	-	+	+	1
Pentanol => Amyl Alcohol													
Perchloric Acid	HClO ₄	70%	n	10%	10%	+	-	+	+/o	+	+	n	1
Perchloroethylene => Tetrachloro Ethylene													
Perhydrol => Hydrogen Peroxide													
Petroleum Ether	C _n H _{2n+2}	100%	+	+/o	+	+	+	+	-	-	+	+	1
Phenole	C ₆ H ₅ OH	100%	-	-	+	+	+	+	-	-	+	+	2
Phenyl Ethyl Ether	C ₆ H ₅ OC ₂ H ₅	100%	-	-	+	n	+	-	-	-	+	+	2
Phenyl Hydrazine	C ₆ H ₅ NHNH ₂	100%	-	-	o	+	+	o	-	-	o	+	2
Phosphoric Acid	H ₃ PO ₄	85%	50%	+	+	+	+	+	+	+	+	+	1
Phosphorous Oxychloride	POCl ₃	100%	-	-	+	+	n	+	+	n	+	+	1
Phosphorous Trichloride	PCl ₃	100%	-	-	+	+	+	o	+	+/o	+	+	1
Phthalic Acid	C ₆ H ₄ (COOH) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Picric Acid	C ₆ H ₂ (NO ₃) ₃ OH	s	+	+	+	+	+	+	+	-	+	+	2
Piperidine	C ₅ H ₁₁ N	100%	-	-	n	n	+	-	-	-	n	+	2
Potash Alum => Potassium Aluminium Sulphate													
Potassium Acetate	CH ₃ COOK	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Aluminium Sulphate	KAl(SO ₄) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Bicarbonate	KHCO ₃	40%	+	+	+	+	+	+	+	+	+	+/o	1
Potassium Bifluoride	KHF ₂	s	n	+	+	+	+	+	+	+	+	+	1
Potassium Bisulphate	KHSO ₄	5%	+	+	+	+	+	+	+	+	+	+	1
Potassium Bitartrate	KC ₄ H ₅ O ₆	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Borate	KBO ₂	s	+	+	+	+	+	+	+	+	+	+	(1)
Potassium Bromate	KBrO ₃	s	+	+	+	+	+	+	+	+	+	+	2
Potassium Bromide	KBr	s	+	+	+	+	10%	+	+	+	+	0,1	1
Potassium Carbonate	K ₂ CO ₃	s	+	+	+	+	+	+	+	55%	+	+	1
Potassium Chlorate	KClO ₃	s	+	+	+	+	+	+	+	+	+	+	2
Potassium Chloride	KCl	s	+	+	+	+	-	+	+	+	+	+/o	1
Potassium Chromate	K ₂ CrO ₄	10%	+	+	+	+	+	+	+	+	+	+	3
Potassium Chrome Sulphate	KCr(SO ₄) ₂	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Cyanate	KOCN	s	+	+	+	+	+	+	+	+	+	+	2
Potassium Cyanide	KCN	s	+	+	+	+	5%	+	+	+	+	5%	3
Potassium Cyanoferrate II	K ₄ Fe(CN) ₆	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Cyanoferrate III	K ₃ Fe(CN) ₆	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Dichromate	K ₂ Cr ₂ O ₇	s	+	+	+	+	25%	+	+	+	+	10%	3
Potassium Fluoride	KF	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Hydroxyde	KOH	50%	+	+	+	+	+	-	+	10%	+	+	1
(25 °C)													
Potassium Iodide	KI	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Nitrate	KNO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Perchlorate	KClO ₄	s	+	+	+	+	n	+	+	+	+	+	1
Potassium Permanganate	KMnO ₄	s	+	+	+	+	+	+	+	6%	+	+	2
Potassium Persulphate	K ₂ S ₂ O ₈	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Phosphate	KH ₂ PO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Pyrochromate => Potassium Dichromate													
Potassium Sulphate	K ₂ SO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Potassium Sulphite	K ₂ SO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Propionic Acid	C ₂ H ₅ COOH	100%	o	+	+	+	+	+	+	+/o	+	+	1
Propionitrile	CH ₃ CH ₂ CN	100%	n	n	+	+	+	+	-	-	+	+	2
Propyl Acetate	CH ₃ COOC ₃ H ₇	100%	-	-	+	+	+	-	+/o	-	+	+	1
Propylene Glycol	CH ₃ CHOHCH ₂ OH	100%	+	+	+	+	+	+	+	+	+	+	1
Prussic Acid => Hydrogen Cyanide													
Pyridine	C ₅ H ₅ N	100%	-	-	o	-	+	-	-	o	+	+	2



ProMinent® Chemical Resistance List

Chemical	Formula	Conc	PMMA	PVC	PP	PVDF	1.4404	FKM	EPDM	PharMed®	PE	2.4819	WPC
Pyrrrole	C ₄ H ₄ NH	100%	n	n	+	n	+	-	-	-	+	+	2
Roman Vitriol => Copper Sulphate													
Salicylic Acid	HOC ₆ H ₄ COOH	s	+	+	+	+	+	+	+	+	+	+/o	1
Salmiac => Ammonium Chloride													
Saltpeter => Potassium Nitrate													
Silic Acid	SiO ₂ * x H ₂ O	s	+	+	+	+	+	+	+	+	+	+	1
Silver Bromide	AgBr	s	+	+	+	+	+/o	+	+	+	+	+	1
Silver Chloride	AgCl	s	+	+	+	+	-	+	+	+	+	+/o	1
Silver Nitrate	AgNO ₃	s	+	+	+	+	+	+	+	+	+	+/o	3
Slaked Lime => Calcium Hydroxide													
Soda => Sodium Carbonate													
Sodium Acetate	NaCH ₃ COO	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Benzoate	C ₆ H ₅ COONa	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Bicarbonate	NaHCO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Bisulphate	NaHSO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Bisulphite	NaHSO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Borate	NaBO ₂	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Bromate	NaBrO ₃	s	+	+	+	+	+	+	+	+	+	+	3
Sodium Bromide	NaBr	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Carbonate	Na ₂ CO ₃	s	+	+	+	+	+/o	+	+	+	+	+	1
Sodium Chlorate	NaClO ₃	s	+	+	+	+	+	+	+	+	+	+	2
Sodium Chloride	NaCl	s	+	+	+	+	-	+	+	+	+	+	1
Sodium Chlorite	NaClO ₂	24%	+	+	+	+	10%	+	+	+	+	10%	2
Sodium Chromate	Na ₂ CrO ₄	s	+	+	+	+	+	+	+	+	+	+	3
Sodium Cyanide	NaCN	s	+	+	+	+	+	+	+	+	+	+	3
Sodium Dichromate	Na ₂ Cr ₂ O ₇	s	+	+	+	+	+	+	+	+	+	+	3
Sodium Dithionite	Na ₂ S ₂ O ₄	s	+	10%	10%	+	+	n	n	+	10%	+/o	1
Sodium Fluoride	NaF	s	+	+	+	+	10%	+	+	+	+	+	1
Sodium Hydrogen Sulphate => Sodium Bisulphate													
Sodium Hydroxide	NaOH	50%	+	+	+	+(60%/+ 25 °C)	-	+	30%	+	+	+	1
Sodium Hypochlorite	NaOCl + NaCl	12%	+	+	o	+	-	+	+	+	o	> 10%	2
Sodium Iodide	NaI	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Metaphosphate	(NaPO ₃) _n	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Nitrate	NaNO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Nitrite	NaNO ₂	s	+	+	+	+	+	+	+	+	+	+	2
Sodium Oxalate	Na ₂ C ₂ O ₄	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Perborate	NaBO ₂ *H ₂ O ₂	s	+	+/o	+	+	+	+	+	+	+	+/o	1
Sodium Perchlorate	NaClO ₄	s	+	+	+	+	10%	+	+	+	+	10%	1
Sodium Peroxide	Na ₂ O ₂	s	+	+	+	+	+	+	+	n	-	+	1
Sodium Persulphate	Na ₂ S ₂ O ₈	s	n	+	+	+	+	+	+	+	+	+	1
Sodium Pyrosulphite	Na ₂ S ₂ O ₅	s	+	+	+	+	+	n	n	+	+	+	1
Sodium Salicylate	C ₆ H ₄ (OH)COONa	s	+	+/o	+	+	+	+	+	+	+	+	1
Sodium Silicate	Na ₂ SiO ₃	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Sulphate	Na ₂ SO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Sulphide	Na ₂ S	s	+	+	+	+	+	+	+	+	+	+	2
Sodium Sulphite	Na ₂ SO ₃	s	+	+	+	+	50%	+	+	+	+	50%	1
Sodium Tetraborate	Na ₂ B ₄ O ₇ * 10 H ₂ O	s	+	+	+	+	+	+	+	+	+	+	1
Sodium Thiosulphate	Na ₂ S ₂ O ₃	s	+	+	+	+	25%	+	+	+	+	25%	1
Sodium Tripolyphosphate	Na ₅ P ₃ O ₁₀	s	+	+	+	+	+	+/o	+	+	+	+	1
Starch	(C ₆ H ₁₀ O ₅) _n	s	+	+	+	+	+	+	n	+	+	+	1
Starch Gum		s	+	+	+	+	+	+	+	+	+	+	1
Styrene	C ₆ H ₅ CHCH ₂	100%	-	-	o	+	+	o	-	-	o	+	2
Sublimate => Mercury-II-Chloride													
Succinic Acid	C ₄ H ₆ O ₄	s	+	+	+	+	+	+	+	+	+	+	1
Sugar Syrup		s	+	+	+	+	+	+	+	+	+	+	1
Sulphur Chloride => Disulphur Dichloride													
Sulphuric Acid	H ₂ SO ₄	98%	30%	50%	85%	+	20%	+	+	30%	80%	+	1
Sulphuric Acid, fuming --> Oleum													
Sulphurous Acid	H ₂ SO ₃	s	+	+	+	+	10%	+	+	+	+	+	(1)
Sulphuryl Chloride	SO ₂ Cl ₂	100%	-	-	-	o	n	+	o	-	-	n	1
Tannic Acid	C ₇₆ H ₅₂ O ₄₆	50%	+	+	+	+	+	+	+	+	+	+	1
Tartaric Acid	C ₄ H ₆ O ₆	s	50%	+	+	+	+	+	+/o	+	+	+	1
Tetrachloro Ethane	C ₂ H ₂ Cl ₄	100%	-	-	o	+	+	o	-	o	o	+	3



ProMinent® Chemical Resistance List

Chemical	Formula	Conc	PMMA	PVC	PP	PVDF	1.4404	FKM	EPDM	PharMed®	PE	2.4819	WPC
Tetrachloro Ethylene	C ₂ Cl ₄	100%	-	-	o	+	+	o	-	o	o	+	3
Tetrachloromethane => Carbon Tetrachloride													
Tetrahydro Furane	C ₄ H ₈ O	100%	-	-	o	-	+	-	-	-	o	+	1
Tetrahydro Naphthalene	C ₁₀ H ₁₂	100%	-	-	-	+	+	+	-	-	o	+	3
Tetralin => Tetrahydro Naphthalene													
THF => Tetrahydrofurane													
Thionyl Chloride	SOCl ₂	100%	-	-	-	+	n	+	+	+	-	n	1
Thiophene	C ₄ H ₄ S	100%	n	-	o	n	+	-	-	-	o	+	3
Tin-II-Chloride	SnCl ₂	s	+	o	+	+	-	+	+	+	+	+/o	1
Tin-II-Sulphate	SnSO ₄	s	n	+	+	+	+	+	+	+	+	+/o	(1)
Tin-IV-Chloride	SnCl ₄	s	n	+	+	+	-	+	+	+	+	+	1
Titanium Tetrachloride	TiCl ₄	100%	n	n	n	+	n	o	-	n	n	n	1
Toluene	C ₆ H ₅ CH ₃	100%	-	-	o	+	+	o	-	-	o	+	2
Toluene Diisocyanate	C ₇ H ₃ (NCO) ₂	100%	n	n	+	+	+	-	+/o	n	+	+	2
Tributyl Phosphate	(C ₄ H ₉) ₃ PO ₄	100%	n	-	+	+	+	-	+	+	+	+	1
Trichloro Ethane	CCl ₃ CH ₃	100%	-	-	o	+	+	+	-	o	o	+	3
Trichloro Ethylene	C ₂ HCl ₃	100%	-	-	o	+	+/o	o	-	o	o	+	3
Trichloro Methane => Chloroform													
Trichloroacetaldehyde Hydrate	CCl ₃ CH(OH) ₂	s	-	-	o	-	+	o	o	n	+	+	2
Trichloroacetic Acid	CCl ₃ COOH	50%	-	+	+	+	-	-	o	+/o	+	+	1
Tricresyl Phosphate	(C ₇ H ₇) ₃ PO ₄	90%	-	-	+	n	+	o	+	+	+	+	2
Triethanol Amine	N(C ₂ H ₄ OH) ₃	100%	+	o	+	n	+	-	+/o	o	+	+	1
Trilene => Trichloro Ethane													
Trioctyl Phosphate	(C ₈ H ₁₇) ₃ PO ₄	100%	n	-	+	+	+	o	+	+	+	+	2
Trisodium Phosphate	Na ₃ PO ₄	s	+	+	+	+	+	+	+	+	+	+	1
Urea	CO(NH ₂) ₂	s	+	+/o	+	+	+	+	+	20%	+	+	1
Vinyl Acetate	CH ₂ =CHOOCCH ₃	100%	-	-	+	+	+	n	n	+/o	+	+	2
Water Glass => Sodium Silicate													
Xylene	C ₆ H ₄ (CH ₃) ₂	100%	-	-	-	+	+	o	-	-	o	+	2
Zinc Acetate	(CH ₃ COO) ₂ Zn	s	+	+	+	+	+	-	+	+	+	+	1
Zinc Chloride	ZnCl ₂	s	+	+	+	+	-	+	+	+	+	n	1
Zinc Sulphate	ZnSO ₄	s	+	+	+	+	+	+	+	+	+	+/o	1



ProMinent® Chemical Resistance List

Overview of the Resistance of Soft PVC Hoses (Guttasyn®) to the Most Common Chemicals

This data applies to standard conditions (20 °C, 1013 mbar).

+	=	resistant
o	=	conditionally resistant
-	=	not resistant

The data has been taken from relevant manufacturers' literature and supplemented by our own tests and experience. As the resistance of a material also depends on other factors, especially pressure and operating conditions etc, this list should merely be regarded as an initial guide and does not claim to offer any guarantees. Take into consideration the fact that conventional dosing agents are largely compounds, the corrosiveness of which cannot simply be calculated by adding together the corrosiveness of each individual component. In cases such as these the material compatibility data produced by the chemical manufacturer must be read as a matter of priority when selecting a material. Safety data sheets do not provide this information and cannot therefore replace application-specific documentation.

Corrosive agent	Concentration in %	Evaluation
Acetic acid	50	o
Acetic acid (wine vinegar)		o
Acetic acid anhydride	100	-
Acetic acid, aqueous	10	+
Acetic ester	100	-
Acetone	all	-
Acetylene tetrabromide	100	-
Aluminium salts, aqueous	all	+
Alums of all kinds, aqueous	all	+
Ammonium salts	all	+
Ammonium, aqueous	15	-
Ammonium, aqueous	saturated	-
Aniline	100	-
Benzene	100	-
Bisulphite, aqueous	40	+
Borax solution	all	+
Boric acid, aqueous	10	+
Bromine, vaporous and liquid		-
Butanol	100	+
Butyl acetate	100	-
Butyric acid, aqueous	20	+
Butyric acid, aqueous	conc.	-
Calcium chloride, aqueous	all	+
Carbon disulphide	100	-
Carbonic acid	all	+
Caustic potash	15	+
Chlorinated hydrocarbons	all	-
Chrome-alum, aqueous	all	+
Chromic acid, aqueous	50	-
Copper sulphate, aqueous	all	+
Creosote		-
Dextrin, aqueous	saturated	+
Diesel oils, compressed oils	100	o
Diethyl ether	100	-
Difluorodichloromethane	100	-
Ethanol	96	-
Ethyl acetate	100	-
Ethylene glycol	30	+
Ferric chloride, aqueous	all	+
Fertilizing manure salt, aqueous	all	+
Formaldehyde, aqueous	30	o
Glacial acetic acid	100	-
Glucose, aqueous	saturated	+
Glycerol	100	-
Halogens	all	-

ProMinent® Chemical Resistance List

Corrosive agent	Concentration in %	Evaluation
Hydrochloric acid	15	+
Hydrogen bromide	10	+
Hydrogen peroxide	to 10	+
Hydrogen sulphide, gaseous	100	-
Ink		+
Magnesium salts, aqueous	all	+
Methyl alcohol	100	+
Methylene chloride	100	-
Nitric acid, aqueous	25	+
Oils => fats, diesel oil, Lubricating oil and similar		
Perchloric acid	all	o
Phenol, aqueous	all	o
Phosphoric acid, aqueous	100	-
Potassium bichromate, aqueous	saturated	+
Potassium persulphate, aqueous	saturated	+
Silver nitrate	10	+
Sodium chloride, aqueous	all	+
Sodium hydroxide	aqueous	+
Sodium hypochlorite	15	+
Sodium salts => sodium chloride		
Sulphur dioxide, gaseous	all	+
Sulphuric acid	30	+
Tetrachloromethane	100	-
Toluene	100	-
Trichloroethylene	100	-
Urea, aqueous	all	+
Xylene	100	-
Zinc salts	all	+

