

ProMinent® Chemical Resistance List

Resistance Of Materials Used In Liquid Ends To The Chemicals Most Frequently Used

Figures are given for norm conditions (20 °C, 1013 mbar)

s	=	Saturated aqueous solution
+	=	Resistant
+/o	=	Practically resistant
o	=	Resistant in certain conditions
-	=	Non resistant
n	=	Resistance not known
=>	=	Refer to
*	=	For composite compounds, bond resistance (e.g. tangite) must be considered. (Use of materials rated "0" and "-" are not recommended!)
**	=	Does not apply to glass fibre reinforced material

Concentration data is given in percentage of weight for aqueous solution. If resistance rate is given with a percentage, this applies to concentrations not exceeding that percentage only.

Note: The resistance of **CSM (Hypalon®)** and **IIR (Butyl rubber)** used in our pulsation dampeners is similar to **EPDM**. **PTFE** is resistant to all the chemicals in this list. It is only attacked by Fluorine and Alkali Metals.

Explanation of abbreviations used as column headings:

Acrylic:	Acrylic resistance
PVC:	PVC, rigid, (PVC-U) resistance
PP:	Polypropylene resistance
PVDF:	PVDF resistance
1.4571:	Stainless steel 1.4571 resistance
FPM:	Fluorine Rubber (Viton® A and B) resistance
EPDM:	Ethylene-Propylene-Dien-rubber resistance
PE:	Polyethylene resistance
2.4819:	Hastelloy C-276 resistance

Viton® is a registered trademark of DuPont Dow Elastomers.

The data has been taken from the 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 for the most part, 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 these data and therefore cannot take the place of the technical documentation on the application.

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Chemical	Formula	Conc	Acrylic	PVC	PP	PVDF	1.4571	FPM	EPDM	PE	2.4819
Acetaldehyde	CH ₃ CHO	100%	-	-	o	-	+	-	+/o	+	+
Acetamide	CH ₃ CONH ₂	s	+	+	+	+	+	o	+	+	+
Acetic Acid	CH ₃ COOH	100%	-	50%	+	+	+	-	o	70%	+
Acetic Anhydride	(CH ₃ CO) ₂ O	100%	-	-	o	o	+	-	+/o	o	+
Acetic Ether =>	Ethyl Acetate										
Acetone	CH ₃ COCH ₃	100%	-	-	+	-	+	-	+	+	+
Acetophenone	C ₆ H ₅ COCH ₃	100%	-	n	+	+	+	-	+	+	+
Acetyl Chloride	CH ₃ COCl	100%	-	+	n	-	o	+	-	n	+
Acetylacetone	CH ₃ COCH ₂ COCH ₃	100%	-	-	+	-	+	-	+	+	+
Acetylene Dichloride =>	Dichloro Ethylene										
Acetylene Tetrachloride =>	Tetrachloro Ethane										
Acrylonitril	CH ₂ =CH-CN	100%	-	-	+	+	+	-	-	+	+
Adipic Acid	HOOC(CH ₂) ₄ COOH	s	+	+	+	+	+	+	+	+	+
Allyl Alcohol	CH ₂ CHCH ₂ OH	96%	-	o	+	+	+	-	+	+	+/o
Aluminium Acetate	Al(CH ₃ COO) ₃	s	+	+	+	+	+	+	+	+	+/o
Aluminium Bromide	AlBr ₃	s	+	+	+	+	n	+	+	+	+
Aluminium Chloride	AlCl ₃	s	+	+	+	+	-	+	+	+	+
Aluminium Fluoride	AlF ₃	10%	+	+	+	+	-	+	+	+	+/o
Aluminium Hydroxide	Al(OH) ₃	s	+	+	+	+	+	+	+	+	+
Aluminium Nitrate	Al(NO ₃) ₃	s	+	+	+	+	+	+	+	+	+
Aluminium Phosphate	AlPO ₄	s	+	+	+	+	+	+	+	+	+
Aluminium Sulphate	Al ₂ (SO ₄) ₃	s	+	+	+	+	+	+	+	+	+
Ammonium Acetate	CH ₃ COONH ₄	s	+	+/o	+	+	+	+	+	+	+
Ammonium Bicarbonate	NH ₄ HCO ₃	s	+	+	+	+	+	+	+	+	+
Ammonium Carbonate	(NH ₄) ₂ CO ₃	40%	+	+	+	+	+	+	+	+	+
Ammonium Chloride	NH ₄ Cl	s	+	+	+	+	-	+	+	+	+/o
Ammonium Fluoride	NH ₄ F	s	+	o	+	+	o	+	+	+	+
Ammonium Hydroxide	"NH ₄ OH"	s	+	+	+	+	+	-	+	+	+
Ammonium Nitrate	NH ₄ NO ₃	s	+	+	+	+	+	+	+	+	+
Ammonium Oxalate	(COONH ₄) ₂ * H ₂ O	s	+	+	+	+	+	+	+	+	+
Ammonium Perchlorate	NH ₄ ClO ₄	10%	+	+	+	+	+	+	+	+	+
Ammonium Peroxodisulphate	(NH ₄) ₂ S ₂ O ₈	s	+	+	+	+	5%	+	+	+	5%
Ammonium Phosphate	(NH ₄) ₃ PO ₄	s	+	+	+	+	10%	+	+	+	10%
Ammonium Sulphate	(NH ₄) ₂ SO ₄	s	+	+	+	+	10%	+	+	+	10%
Ammonium Sulphide	(NH ₄) ₂ S	s	+	+	+	+	n	+	+	+	n
Ammonium Aluminium sulphate	NH ₄ Al(SO ₄) ₂	s	+	+	+	+	+	+	+	+	+
Amyl Alcohol	C ₅ H ₁₁ OH	100%	+	+	+	+	+	-	+	+	+
Aniline	C ₆ H ₅ NH ₂	100%	-	-	+	+	+	-	+/o	+	+
Aniline Hydrochloride	C ₆ H ₅ NH ₂ . HCl	s	n	+	+	+	-	+/o	+/o	+	+
Antimony Trichloride	SbCl ₃	s	+	+	+	+	-	+	+	+	n
Aqua Regia	3 HCl + HNO ₃	100%	-	+	-	+	-	-	o	-	-
Arsenic Acid	H ₃ AsO ₄	s	+	+	+	+	+	+	+	+	+
Barium Carbonate	BaCO ₃	s	+	+	+	+	+	+	+	+	+
Barium Chloride	BaCl ₂	s	+	+	+	+	-	+	+	+	+
Barium Hydroxide	Ba(OH) ₂	s	+	+	+	+	+	+	+	+	+
Barium Nitrate	Ba(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+
Barium Sulphate	BaSO ₄	s	+	+	+	+	+	+	+	+	+
Barium Sulphide	BaS	s	+	+	+	+	+	+	+	+	+
Benzaldehyde	C ₆ H ₅ CHO	100%	-	-	+	+	+	+	+	o	+

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Benzene	C ₆ H ₆	100%	-	-	o	+	+	o	-	o	+
Benzene Sulphonic Acid	C ₆ H ₅ SO ₃ H	10%	n	n	+	+	+	+	-	n	+
Benzoic Acid	C ₆ H ₅ COOH	s	+	+	+	+	+	+	+	+	+
Benzoyl Chloride	C ₆ H ₅ COCl	100%	-	n	o	n	o	+	+	o	+
Benzyl Alcohol	C ₆ H ₅ CH ₂ OH	100%	-	-	+	+	+	+	-	+	+
Benzyl Benzoate	C ₆ H ₅ COOC ₇ H ₇	100%	-	-	+	o	+	+	-	+	+
Benzyl Chloride	C ₆ H ₅ CH ₂ Cl	90%	-	n	o	+	+	+	-	o	+
Bitter Salt =>	Magnesium Sulphate										
Bleach =>	Sodium Hypochlorite										
Blue Vitriol =>	Copper Sulphate										
Borax =>	Sodium Tetraborate										
Boric Acid	H ₃ BO ₃	s	+	+	+	+	+	+	+	+	+
Brine		s	+	+/o	+	+	+/o	+	+	+	+
Bromine	Br ₂	100%	-	-	-	+	-	-	-	-	+
Bromine Water	Br ₂ + H ₂ O	s	-	+	-	+	-	-	-	-	n
Bromo Benzene	C ₆ H ₅ Br	100%	n	n	o	+	+	o	-	o	+
Bromochloro Methane	CH ₂ BrCl	100%	-	-	-	+	+	n	+/o	o	+
Bromochlorotrifluoro Ethane	HCClBrCF ₃	100%	-	-	o	+	+	+	-	o	+
Butanediol	HOC ₄ H ₈ OH	10%	n	+	+	+	+	o	+	+	+
Butanetriol	C ₄ H ₁₀ O ₃	s	+	+	+	+	+	o	+	+	+
Butanol	C ₄ H ₉ OH	100%	-	+	+	+	+	o	+/o	+	+
Butyl Acetate	C ₇ H ₁₃ O ₂	100%	-	-	+	+	+	-	-	+	+
Butyl Acetate	CH ₃ COOC ₄ H ₉	100%	-	-	o	+	+	-	+/o	-	+
Butyl Alcohol =>	Butanol										
Butyl Amine	C ₄ H ₉ NH ₂	100%	n	n	n	o	+	-	-	+	+
Butyl Benzoate	C ₆ H ₅ COOC ₄ H ₉	100%	-	-	o	n	+	+	+	o	+
Butyl Mercaptane	C ₄ H ₉ SH	100%	n	n	n	+	n	+	-	n	n
Butyl Oleate	C ₂₂ H ₄₂ O ₂	100%	n	n	n	+	+	+	+/o	n	+
Butyl Stearate	C ₂₂ H ₄₄ O ₂	100%	o	n	n	+	+	+	-	n	+
Butyraldehyde	C ₃ H ₇ CHO	100%	-	n	+	n	+	-	+/o	+	+
Butyric Acid	C ₃ H ₇ COOH	100%	5%	20%	+	+	+	+	+	+	+
Calcium Acetate	(CH ₃ COO) ₂ Ca	s	+	+	+	+	+	+	+	+	+
Calcium Bisulphite	Ca(HSO ₃) ₂	s	+	+	+	+	+	+	+	+	+
Calcium Carbonate	CaCO ₃	s	+	+	+	+	+	+	+	+	+
Calcium Chloride	CaCl ₂	s	+	+	+	+	-	+	+	+	+
Calcium Cyanide	Ca(CN) ₂	s	+	+	+	+	n	+	+	+	n
Calcium Hydroxide	Ca(OH) ₂	s	+	+	+	+	+	+	+	+	+
Calcium Hypochlorite	Ca(OCl) ₂	s	+	+	o	+	-	o	+	+	+
Calcium Nitrate	Ca(NO ₃) ₂	s	+	50%	50%	+	+	+	+	+	+
Calcium Phosphate	Ca ₃ (PO ₄) ₂	s	+	+	+	+	+	+	+	+	+
Calcium Sulphate	CaSO ₄	s	+	+	+	+	+	+	+	+	+
Calcium Sulphide	CaS	s	+	+	+	+	n	+	+	+	+
Calcium Sulphite	CaSO ₃	s	+	+	+	+	+	+	+	+	+
Calcium Thiosulphate	CaS ₂ O ₃	s	+	+	+	+	-	+	+	+	+
Carbolic Acid =>	Phenole										
Carbon Disulphide	CS ₂	100%	-	-	o	+	+	+	-	o	+
Carbon Tetrachloride	CCl ₄	100%	-	-	-	+	+	+	-	o	+
Carbonic Acid	"H ₂ CO ₃ "	s	+	+	+	+	+	+	+	+	+
Caustic Potash =>	Potassium Hydroxide										

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Caustic Soda =>	Sodium Hydroxide										
Chloric Acid	HClO ₃	20%	+	+	-	+	-	o	o	10%	+
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	+	-	+	+	o	+
Chlorobenzine	C ₆ H ₅ Cl	100%	-	-	+	+	+	+	-	o	+
Chloroethanol	ClCH ₂ CH ₂ OH	100%	-	-	+	o	+	-	o	+	+
Chloroethylbenzene	C ₆ H ₄ ClC ₂ H ₅	100%	-	-	o	n	+	o	-	o	+
Chlorophenole	C ₆ H ₄ OHCl	100%	-	n	+	+	+	n	-	+	+
Chlorotoluene	C ₇ H ₇ Cl	100%	-	-	n	+	+	+	-	n	+
Chloroacetone	ClCH ₂ COCH ₃	100%	-	-	n	n	+	-	+	n	+
Chlorobutadiene	C ₄ H ₅ Cl	100%	-	-	n	n	+	+	-	n	+
Chloroform	CHCl ₃	100%	-	-	o	+	+	+	-	-	+
Chlorohydrin	C ₃ H ₅ OCl	100%	-	n	+	-	+	+	o	+	+
Chloroprene =>	Chlorobutadiene										
Chlorosulphonic Acid	SO ₂ (OH)Cl	100%	-	o	-	-	-	-	-	-	o
Chrome-alum =>	Potassium Chrome Sulphate										
Chromic Acid	H ₂ CrO ₄	50%	-	+	o	+	10%	+	-	+	10%
Chromic-Sulphuric Acid	K ₂ CrO ₄ + H ₂ SO ₄	s	-	+	-	+	n	n	n	-	n
Chromium Sulphate	Cr ₂ (SO ₄) ₃	s	+	+	+	+	+	+	+	+	+
Citric Acid	C ₆ H ₈ O ₇	s	+	+	+	+	+	+	+	+	+
Cobalt Chloride	CoCl ₂	s	+	+	+	+	-	+	+	+	+
Copper-II-Acetate	Cu(CH ₃ COO) ₂	s	+	+	+	+	+	+	+	+	+
Copper-II-Arsenite	Cu ₃ (AsO ₃) ₂	s	+	+	+	+	+	+	+	+	+
Copper-II-Carbonate	CuCO ₃	s	+	+	+	+	+	+	+	+	+
Copper-II-Chloride	CuCl ₂	s	+	+	+	+	1%	+	+	+	+
Copper-II-Cyanide	Cu(CN) ₂	s	+	+	+	+	+	+	+	+	+
Copper-II-Fluoride	CuF ₂	s	+	+	+	+	+	+	+	+	+
Copper-II-Nitrate	Cu(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+/o
Copper-II-Sulphate	CuSO ₄	s	+	+	+	+	+	+	+	+	+
Cresylic acids	C ₆ H ₄ CH ₃ OH	100%	o	o	+	+	+	+	-	+	+
Crotonaldehyde	CH ₃ C ₂ H ₂ CHO	100%	n	-	+	+	+	-	+	+	+
Cubic Nitre =>	Sodium Nitrate										
Cumene =>	Isopropyl Benzene										
Cyclo Hexane	C ₆ H ₁₂	100%	+	-	+	+	+	+	-	+	o
Cyclohexanole	C ₆ H ₁₁ OH	100%	o	+/o	+	+	+	+	-	+	+
Cyclohexanone	C ₆ H ₁₀ O	100%	-	-	+	+	+	-	+/o	+	+
Cyclohexyl Alcohol =>	Cyclohexanol										
Cyclohexylamine	C ₆ H ₁₁ NH ₂	100%	n	n	n	n	+	-	n	n	+
Decahydronaphthaline	C ₁₀ H ₁₈	100%	-	+/o	o	+	n	o	-	o	+
Decaline =>	Decahydronaphthalene										
Dextrose =>	Glucose										
Diacetonolcohol	C ₆ H ₁₂ O ₂	100%	-	-	+	+	+	-	+	+	+
Dibromoethane	C ₂ H ₄ Br ₂	100%	-	-	n	+	+	+	-	-	+
Dibutyl Ether	C ₄ H ₉ OC ₄ H ₉	100%	-	-	+	+	+	-	o	+	+
Dibutyl Phthalate	C ₁₆ H ₂₂ O ₄	100%	-	-	+	+	+	+	+/o	o	+
Dibutylamine	(C ₄ H ₉) ₂ NH	100%	n	n	+	+	+	-	-	+	+
Dichloroacetic acid	Cl ₂ CHCOOH	100%	-	+	+	+	+	-	+	+	+
Dichlorobenzene	C ₆ H ₄ Cl ₂	100%	-	-	o	+	+	+	-	o	+

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Dichlorobutane	C ₄ H ₈ Cl ₂	100%	-	-	o	+	+	+	-	o	+
Dichlorobutene	C ₄ H ₆ Cl ₂	100%	-	-	o	+	+	o	-	o	+
Dichloroethane	C ₂ H ₄ Cl ₂	100%	-	-	o	+	+	+	-	-	+
Dichloroethylene	C ₂ H ₂ Cl ₂	100%	-	-	o	+	+	o	-	-	+
Dichloromethane	CH ₂ Cl ₂	100%	-	-	o	o	o	+	-	-	+
Dichloroisopropyl Ether	(C ₃ H ₆ Cl) ₂ O	100%	-	-	o	n	+	o	o	o	+
Dicyclohexylamine	(C ₆ H ₁₂) ₂ NH	100%	-	-	o	n	+	-	-	o	+
Diethyleneglycol	C ₄ H ₁₀ O ₃	s	+	+	+	+	+	+	+	+	+
Diethyleneglycolethyl Ether	C ₈ H ₁₈ O ₃	100%	n	n	+	+	+	n	+/o	+	+
Diethylether	C ₂ H ₅ OC ₂ H ₅	100%	-	-	o	+	+	-	-	o	+
Diglycolic Acid	C ₄ H ₆ O ₅	30%	+	+	+	+	+	+	n	+	+
Dihexyl Phthalate	C ₂₀ H ₂₆ O ₄	100%	-	-	+	+	+	-	n	+	+
Diisobutylketone	C ₉ H ₁₈ O	100%	-	-	+	+	+	-	+	+	+
Di-iso-nonyl Phthalate	C ₂₆ H ₄₂ O ₄	100%	-	-	+	+	+	n	n	+	+
Diisopropylketone	C ₇ H ₁₄ O	100%	-	-	+	+	+	-	+	+	+
Dimethyl Carbonate	(CH ₃ O) ₂ CO	100%	n	n	+	+	+	+	-	+	+
Dimethyl Ketone =>	Acetone										
Dimethyl Phthalate	C ₁₀ H ₁₀ O ₄	100%	-	-	+	+	+	-	+/o	+	+
Dimethylformamide	HCON(CH ₃) ₂	100%	-	-	+	-	+	-	+	+	+
Dimethylhydrazine	H ₂ NN(CH ₃) ₂	100%	n	n	+	n	+	-	+	+	+
Diocetyl Phthalate	C ₄ H ₄ (COOC ₈ H ₁₇) ₂	100%	-	-	+	+	+	-	+/o	+	+
Dioxane	C ₄ H ₈ O ₂	100%	-	-	o	o	+	-	+/o	+	+
Disodium Hydrogenphosphate	Na ₂ HPO ₄	s	+	+	+	+	+	+	+	+	+
Disulphur Dichloride	S ₂ Cl ₂	100%	n	n	n	+	n	+	-	n	n
DMF =>	Dimethylformamide										
Engine Oils		100%	n	+/o	+	+	+	+	-	+	+
Epsom salts =>	Magnesium Sulphate										
Ethanol	C ₂ H ₅ OH	100%	-	+	+	+	+	-	+	+	+
Ethanol Amine	HOC ₂ H ₄ NH ₂	100%	o	n	+	+	+	-	+/o	+	+
Ethyl Acetate	CH ₃ COOC ₂ H ₅	100%	-	-	35%	+	+	-	+/o	+	+
Ethyl Acrylate	C ₂ H ₃ COOC ₂ H ₅	100%	-	-	+	o	+	-	+/o	+	+
Ethyl Benzene	C ₆ H ₅ -C ₂ H ₅	100%	-	-	o	+	+	o	-	o	+
Ethyl Benzoate	C ₆ H ₅ COOC ₂ H ₅	100%	n	-	+	o	+	+	-	+	+
Ethyl Bromide	C ₂ H ₅ Br	100%	-	n	+	+	n	+	-	+	+
Ethyl Chloroacetate	ClCH ₂ COOC ₂ H ₅	100%	-	o	+	+	+	+	-	+	+
Ethyl Chlorocarbonate	ClCO ₂ C ₂ H ₅	100%	n	n	n	n	n	+	-	n	n
Ethyl Cyclopentane	C ₅ H ₄ C ₂ H ₅	100%	+	+	+	+	+	+	-	+	+
Ethylacetoacetate	C ₆ H ₁₀ O ₃	100%	n	-	+	+	+	-	+/o	+	+
Ethylacrylic Acid	C ₄ H ₇ COOH	100%	n	n	+	+	+	n	+/o	+	+
Ethylene Diamine	(CH ₂ NH ₂) ₂	100%	o	o	+	+	o	-	+	+	o
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	+	+
Ethylhexanol	C ₈ H ₁₆ O	100%	n	+/o	+	+	+	+	+	+	+
Fatty Acids	R-COOH	100%	+	+	+	+	+	+	o	+	+
Ferric Chloride	FeCl ₃	s	+	+	+	+	-	+	+	+	n
Ferric Nitrate	Fe(NO ₃) ₃	s	+	+	+	+	+	+	+	+	+

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Chemical	Formula	Conc	Acrylic	PVC	PP	PVDF	1.4571	FPM	EPDM	PE	2.4819
Ferric Phosphate	FePO ₄	s	+	+	+	+	+	+	+	+	+
Ferric Sulphate	Fe ₂ (SO ₄) ₃	s	+	+	+	+	o	+	+	+	+
Ferrous Chloride	FeCl ₂	s	+	+	+	+	-	+	+	+	+
Ferrous Sulphate	FeSO ₄	s	+	+	+	+	+	+	+	+	+
Fixing Salt =>	Sodium Thiosulphate										
Fluorobenzene	C ₆ H ₅ F	100%	-	-	+	+	+	o	-	o	+
Fluoroboric Acid	HF ₄	35%	+	+	+	+	o	+	+	+	+
Fluorosilicic Acid	H ₂ SiF ₆	100%	+	30%	30%	+	o	+	+	40%	+/o
Formaldehyde	CH ₂ O	40%	+	+	+	+	+	-	+/o	+	+
Formalin =>	Formaldehyde										
Formamide	HCONH ₂	100%	+	-	+	+	+	+	+	+	+
Formic Acid	HCOOH	s	-	+/o	+	+	+	-	-	+	+
Furane	C ₄ H ₄ O	100%	-	-	+	-	+	-	n	+	+
Furane Aldehyde	C ₅ H ₅ O ₂	100%	n	n	n	o	+	-	+/o	n	n
Furfuryl Alcohol	OC ₄ H ₃ CH ₂ OH	100%	-	-	+	o	+	n	+/o	+	+
G allic Acid	C ₆ H ₂ (OH) ₃ COOH	5%	+	+	+	+	+	+	+/o	+	+
Gasoline		100%	-	-	+	+	+	+	-	+	+
Glauber's Salt =>	Sodium Sulphate										
Glucose	C ₆ H ₁₂ O ₆	s	+	+	+	+	+	+	+	+	+
Glycerol	C ₃ H ₅ (OH) ₃	100%	+	+	+	+	+	+	+	+	+
Glycerol Triacetate	C ₃ H ₅ (CH ₃ COO) ₃	100%	n	n	+	+	+	-	+	+	+
Glycine	NH ₂ CH ₂ COOH	10%	+	+	+	+	+	+	+	+	+
Glycol	C ₂ H ₄ (OH) ₂	100%	+	+	+	+	+	+	+	+	+
Glycolic Acid	CH ₂ OHCOOH	70%	+	37%	+	+	+	+	+	+	+
Gypsum =>	Calcium Sulphate										
H eptane	C ₇ H ₁₆	100%	+	+	+	+	+	+	-	+	+
Hexanal	C ₅ H ₁₁ CHO	100%	n	n	+	+	+	-	+/o	+	+
Hexane	C ₆ H ₁₄	100%	+	+	+	+	+	+	-	+	+
Hexanol	C ₆ H ₁₃ OH	100%	-	-	+	+	+	n	+	+	+
Hexantriol	C ₆ H ₉ (OH) ₃	100%	n	n	+	+	+	+	+	+	+
Hexene	C ₆ H ₁₂	100%	n	+	+	+	+	+	-	+	+
Hydrazine Hydrate	N ₂ H ₄ * H ₂ O	s	+	+	+	+	+	n	+	+	+
Hydrobromic Acid	HBr	50%	+	+	+	+	-	-	+	+	o
Hydrochloric Acid	HCl	38%	32%	+	+	+	-	o	+	+	+
Hydrofluoric Acid	HF	80%	-	40%*	40%**+	+	-	+	o	40%	+/o
Hydrogen Cyanide	HCN	s	+	+	+	+	+	+	+	+	+
Hydrogen Peroxide	H ₂ O ₂	90%	40%	40%	30%	+	+	30%	30%	+	+
Hydroiodic Acid	HI	s	+	+	+	+	-	-	n	+	n
Hydroquinone	C ₆ H ₄ (OH) ₂	s	o	+	+	+	+	+	-	+	+
Hydroxylamine Sulphate	(NH ₂ OH) ₂ * H ₂ SO ₄	10%	+	+	+	+	+	+	+	+	+
Hypochlorous Acid	HOCl	s	+	+	o	+	-	+	+/o	o	+
I odine	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%	-	+	+	+	+	+	+	+	+
Isopropanol =>	Isopropyl Alcohol										
Isopropylacetate	CH ₃ COOCH(CH ₃) ₂	100%	-	-	+	+	+	-	+/o	+	+

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Isopropyl Alcohol	(CH ₃) ₂ CHOH	100%	-	+/o	+	+	+	+	+	+	+
Isopropylbenzene	C ₆ H ₅ CH(CH ₃) ₂	100%	-	-	o	+	+	+	-	o	+
Isopropylchloride	CH ₃ CHClCH ₃	80%	-	-	o	+	+	+	-	o	+/o
Isopropylether	C ₆ H ₁₄ O	100%	-	-	o	+	+	-	-	o	+
Kitchen Salt =>	Sodium Chloride										
Lactic Acid	C ₃ H ₆ O ₃	100%	-	+	+	+	+/o	+	10%	+	+
Lead Acetate	Pb(CH ₃ COO) ₂	s	+	+	+	+	+	+	+	+	+
Lead Nitrate	Pb(NO ₃) ₂	50%	+	+	+	+	+	+	+	+	+
Lead Sugar =>	Lead Acetate										
Lead Sulphate	PbSO ₄	s	+	+	+	+	+	+	+	+	+
Lead Tetraethyl	Pb(C ₂ H ₅) ₄	100%	+	+	+	+	+	+	-	+	+
Lime Milk =>	Calcium Hydroxide										
Liquid Ammonia =>	Ammonium Hydroxide										
Lithium Bromide	LiBr	s	+	+	+	+	+	+	+	+	+
Lithium Chloride	LiCl	s	+	+	+	+	-	+	+	+	n
Lunar Caustic =>	Silver Nitrate										
Magnesium Carbonate	MgCO₃	s	+	+	+	+	+	+	+	+	+/o
Magnesium Chloride	MgCl ₂	s	+	+	+	+	o	+	+	+	+
Magnesium Hydroxide	Mg(OH) ₂	s	+	+	+	+	+	+	+	+	+
Magnesium Nitrate	Mg(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+
Magnesium Sulphate	MgSO ₄	s	+	+	+	+	+	+	+	+	+/o
Maleic Acid	C ₄ H ₄ O ₄	s	+	+	+	+	+	+	+	+	+
Malic Acid	C ₄ H ₆ O ₅	s	+	+	+	+	+	+	+	+	+
Manganese-II-Chloride	MnCl ₂	s	+	+	+	+	-	+	+	+	+
Manganese-II-Sulphate	MnSO ₄	s	+	+	+	+	+	+	+	+	+
MEK =>	Methyl Ethyl Ketone										
Mercury	Hg	100%	+	+	+	+	+	+	+	+	+
Mercury-II-Chloride	HgCl ₂	s	+	+	+	+	-	+	+	+	+
Mercury-II-Cyanide	Hg(CN) ₂	s	+	+	+	+	+	+	+	+	+
Mercury-II-Nitrate	Hg(NO ₃) ₂	s	+	+	+	+	+	+	+	+	+
Mesityl Oxide	C ₆ H ₁₀ O	100%	-	-	n	n	+	-	+/o	n	+
Methacrylic Acid	C ₃ H ₅ COOH	100%	n	n	+	+	+	o	+/o	+	+
Methanol	CH ₃ OH	100%	-	+	+	+	+	+	+	+	+
Methoxybutanol	CH ₃ O(CH ₂) ₄ OH	100%	-	-	+	+	+	+	o	+	+
Methylacetate	CH ₃ COOCH ₃	60%	-	-	+	+	+	-	+/o	+	+
Methylacrylate	C ₂ H ₃ COOCH ₃	100%	-	-	+	+	+	-	+/o	+	+
Methylbenzoate	C ₆ H ₅ COOCH ₃	100%	-	-	+	o	+	+	-	+	+
Methylcatechol	C ₆ H ₃ (OH) ₂ CH ₃	s	+	+	+	+	+	+	-	+	+
Methylcellulose		s	+	+	+	+	+	+	+	+	+
Methylchloroacetate	ClCH ₂ COOCH ₃	100%	-	o	+	+	+	o	-	+	+
Methylcyclopentane	C ₅ H ₉ CH ₃	100%	+	+	+	+	+	+	-	+	+
Methyldichloroacetate	Cl ₂ CHCOOCH ₃	100%	-	-	+	n	+	-	n	+	+
Methylethyl ketone	CH ₃ COC ₂ H ₅	100%	-	-	+	o	+	-	+	+	+
Methylglycol	C ₃ H ₈ O ₂	100%	+	+	+	+	+	-	+/o	+	+
Methylisobutyl ketone	CH ₃ COC ₄ H ₉	100%	-	-	+	+	+	-	o	+	+
Methylisopropyl ketone	CH ₃ COC ₃ H ₇	100%	-	-	+	+	+	-	+/o	+	+
Methylmethacrylate	C ₃ H ₅ COOCH ₃	100%	-	-	+	+	+	-	-	+	+

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Methyloleate	$C_{17}H_{33}COOCH_3$	100%	n	n	+	+	+	+	+/o	+	+
Methylsalicylate	$HOC_6H_4COOCH_3$	100%	-	-	+	+	+	n	+/o	+	+
Methylacetyl Acetate	$C_5H_8O_3$	100%	-	-	+	+	+	-	+/o	+	+
Methylamine	CH_3NH_2	32%	+	o	+	o	+	-	+	+	+
Methylene Chloride =>	Dichloro Methane										
Mirabilite =>	Sodium Sulphate										
Morpholine	C_4H_9ON	100%	-	-	+	+	+	n	n	+	+
Muriatic Acid =>	Hydrochloric Acid										
Natron =>	Sodium Bicarbonate										
Nickel-II-Acetate	$(CH_3COO)_2Ni$	s	+	+	+	+	+	-	+	+	+
Nickel-II-Chloride	$NiCl_2$	s	+	+	+	+	-	+	+	+	+
Nickel-II-Nitrate	$Ni(NO_3)_2$	s	+	+	+	+	+	+	+	+	+/o
Nickel-II-Sulphate	$NiSO_4$	s	+	+	+	+	+	+	+	+	+/o
Nitrate of Lime =>	Calcium Nitrate										
Nitric Acid	HNO_3	99%	40%	50%*	50%	+	90%	65%	40%	50%	65%
Nitromethane	CH_3NO_2	100%	-	-	+	o	+	-	+/o	+	+
Nitropropane	$(CH_3)_2CHNO_2$	100%	-	-	+	n	+	-	+/o	+	+
Nitrotoluene	$C_6H_4NO_2CH_3$	100%	-	-	+	+	+	o	-	+	+
Octane	C_8H_{18}	100%	o	+	+	+	+	+	-	+	+
Octanol	$C_8H_{17}OH$	100%	-	-	+	+	+	+	+	+	+
Octyl Cresol	$C_{15}H_{24}O$	100%	-	-	+	+	+	o	n	+	+
Oil =>	Engine Oils										
Oleum	$H_2SO_4 + SO_3$	10%	n	-	-	-	+	+	-	-	+
Orthophosphoric Acid =>	Phosphoric Acid										
Oxalic Acid	$(COOH)_2$	s	+	+	+	+	10%	+	+	+	+/o
Pentane	C_5H_{12}	100%	+	+	+	+	+	+	-	+	+
Pentanol =>	Amyl Alcohol										
Perchloric Acid	$HClO_4$	70%	n	10%	10%	+	-	+	+/o	+	n
Perchloroethylene =>	Tetrachloro Ethylene										
Perhydrol =>	Hydrogen Peroxide										
Petroleum Ether	C_nH_{2n+2}	100%	+	+/o	+	+	+	+	-	+	+
Phenole	C_6H_5OH	100%	-	-	+	+	+	+	-	+	+
Phenyl Ethyl Ether	$C_6H_5OC_2H_5$	100%	-	-	+	n	+	-	-	+	+
Phenyl Hydrazine	$C_6H_5NHNH_2$	100%	-	-	o	+	+	o	-	o	+
Phosphoric Acid	H_3PO_4	85%	50%	+	+	+	+	+	+	+	+
Phosphorous Oxychloride	$POCl_3$	100%	-	-	+	+	n	+	+	+	+
Phosphorous Trichloride	PCl_3	100%	-	-	+	+	+	o	+	+	+
Phthalic Acid	$C_6H_4(COOH)_2$	s	+	+	+	+	+	+	+	+	+
Picric Acid	$C_6H_2(NO_3)_3OH$	s	+	+	+	+	+	+	+	+	+
Piperidine	$C_5H_{11}N$	100%	-	-	n	+	+	-	-	n	+
Potash Alum =>	Potassium Aluminium Sulphate										
Potassium Acetate	CH_3COOK	s	+	+	+	+	+	+	+	+	+
Potassium Aluminium Sulphate	$KAl(SO_4)_2$	s	+	+	+	+	+	+	+	+	+
Potassium Bicarbonate	$KHCO_3$	40%	+	+	+	+	+	+	+	+	+/o
Potassium Bifluoride	KHF_2	s	n	+	+	+	+	+	+	+	+
Potassium Bisulphate	$KHSO_4$	5%	+	+	+	+	+	+	+	+	+
Potassium Bitartrate	$KC_4H_5O_6$	s	+	+	+	+	+	+	+	+	+

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Potassium Borate	KBO ₂	s	+	+	+	+	+	+	+	+	+
Potassium Bromate	KBrO ₃	s	+	+	+	+	+	+	+	+	+
Potassium Bromide	KBr	s	+	+	+	+	10%	+	+	+	10%
Potassium Carbonate	K ₂ CO ₃	s	+	+	+	+	+	+	+	+	+
Potassium Chlorate	KClO ₃	s	+	+	+	+	+	+	+	+	+
Potassium Chloride	KCl	s	+	+	+	+	-	+	+	+	+/o
Potassium Chromate	K ₂ CrO ₄	10%	+	+	+	+	+	+	+	+	+
Potassium Chrome Sulphate	KCr(SO ₄) ₂	s	+	+	+	+	+	+	+	+	+
Potassium Cyanate	KOCN	s	+	+	+	+	+	+	+	+	+
Potassium Cyanide	KCN	s	+	+	+	+	5%	+	+	+	5%
Potassium Cyanoferrate II	K ₄ Fe(CN) ₆	s	+	+	+	+	+	+	+	+	+
Potassium Cyanoferrate III	K ₃ Fe(CN) ₆	s	+	+	+	+	+	+	+	+	+
Potassium Dichromate	K ₂ Cr ₂ O ₇	s	+	+	+	+	25%	+	+	+	10%
Potassium Fluoride	KF	s	+	+	+	+	+	+	+	+	+
Potassium Hydroxyde	KOH	50%	+	+	+	+	+	-	+	+	+
Potassium Iodide	KI	s	+	+	+	+	+	+	+	+	+
Potassium Nitrate	KNO ₃	s	+	+	+	+	+	+	+	+	+
Potassium Perchlorate	KClO ₄	s	+	+	+	+	n	+	+	+	+
Potassium Permanganate	KMnO ₄	s	+	+	+	+	+	+	+	+	+
Potassium Persulphate	K ₂ S ₂ O ₈	s	+	+	+	+	+	+	+	+	+
Potassium Phosphate	KH ₂ PO ₄	s	+	+	+	+	+	+	+	+	+
Potassium Pyrochromate =>	Potassium Dichromate										
Potassium Sulphate	K ₂ SO ₄	s	+	+	+	0	+	+	+	+	+
Potassium Sulphite	K ₂ SO ₃	s	+	+	+	+	+	+	+	+	+
Propionic Acid	C ₂ H ₅ COOH	100%	o	+	+	+	+	+	+	+	+
Propionitrile	CH ₃ CH ₂ CN	100%	n	n	+	+	+	+	-	+	+
Propyl Acetate	CH ₃ COOC ₃ H ₇	100%	-	-	+	+	+	-	+/o	+	+
Propylene Glycol	CH ₃ CHOHCH ₂ OH	100%	+	+	+	+	+	+	+	+	+
Prussic Acid =>	Hydrogen Cyanide										
Pyridine	C ₅ H ₅ N	100%	-	-	o	-	+	-	-	+	+
Pyrrole	C ₄ H ₄ N	100%	n	n	+	n	+	-	-	+	+
Roman Vitriol =>	Copper Sulphate										
Salicylic Acid	HOC ₆ H ₄ COOH	s	+	+	+	+	+	+	+	+	+/o
Salmiac =>	Ammonium Chloride										
Saltpeter =>	Potassium Nitrate										
Silic Acid	SiO ₂ * x H ₂ O	s	+	+	+	+	+	+	+	+	+
Silver Bromide	AgBr	s	+	+	+	+	+/o	+	+	+	+
Silver Chloride	AgCl	s	+	+	+	+	-	+	+	+	+/o
Silver Nitrate	AgNO ₃	s	+	+	+	+	+	+	+	+	+/o
Slaked Lime =>	Calcium Hydroxide										
Soda =>	Sodium Carbonate										
Sodium Acetate	NaCH ₃ COO	s	+	+	+	+	+	+	+	+	+
Sodium Benzoate	C ₆ H ₅ COONa	s	+	+	+	+	+	+	+	+	+
Sodium Bicarbonate	NaHCO ₃	s	+	+	+	+	+	+	+	+	+
Sodium Bisulphate	NaHSO ₄	s	+	+	+	+	+	+	+	+	+
Sodium Bisulphite	NaHSO ₃	s	+	+	+	+	+	+	+	+	+
Sodium Borate	NaBO ₂	s	+	+	+	+	+	+	+	+	+
Sodium Bromate	NaBrO ₃	s	+	+	+	+	+	+	+	+	+

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Sodium Bromide	NaBr	s	+	+	+	+	+	+	+	+	+
Sodium Carbonate	Na ₂ CO ₃	s	+	+	+	+	+/o	+	+	+	+
Sodium Chlorate	NaClO ₃	s	+	+	+	+	+	+	+	+	+
Sodium Chloride	NaCl	s	+	+	+	+	-	+	+	+	+
Sodium Chlorite	NaClO ₂	24%	+	+	+	+	10%	+	+	+	10%
Sodium Chromate	Na ₂ CrO ₄	s	+	+	+	+	+	+	+	+	+
Sodium Cyanide	NaCN	s	+	+	+	+	+	+	+	+	+
Sodium Dichromate	Na ₂ Cr ₂ O ₇	s	+	+	+	+	+	+	+	+	+
Sodium Dithionite	Na ₂ S ₂ O ₄	s	+	10%	10%	+	+	n	n	10%	+/o
Sodium Fluoride	NaF	s	+	+	+	+	10%	+	+	+	+
Sodium Hydrogen Sulphate =>	Sodium Bisulphate										
Sodium Hydroxide	NaOH	50%	+	+	+	+	+	-	+	+	+
Sodium Hypochlorite	NaOCl + NaCl	12%	+	+	o	+	-	+	+	o	> 10%
Sodium Iodide	NaI	s	+	+	+	+	+	+	+	+	+
Sodium Metaphosphate	(NaPO ₃) _n	s	+	+	+	+	+	+	+	+	+
Sodium Nitrate	NaNO ₃	s	+	+	+	+	+	+	+	+	+
Sodium Nitrite	NaNO ₂	s	+	+	+	+	+	+	+	+	+
Sodium Oxalate	Na ₂ C ₂ O ₄	s	+	+	+	+	+	+	+	+	+
Sodium Perborate	NaBO ₂ *H ₂ O ₂	s	+	+/o	+	+	+	+	+	+	+/o
Sodium Perchlorate	NaClO ₄	s	+	+	+	+	10%	+	+	+	10%
Sodium Peroxide	Na ₂ O ₂	s	+	+	+	+	+	+	+	-	+
Sodium Persulphate	Na ₂ S ₂ O ₈	s	n	+	+	+	+	+	+	+	+
Sodium Pyrosulphite	Na ₂ S ₂ O ₅	s	+	+	+	+	+	n	n	+	+
Sodium Salicylate	C ₆ H ₄ (OH)COONa	s	+	+/o	+	+	+	+	+	+	+
Sodium Silicate	Na ₂ SiO ₃	s	+	+	+	+	+	+	+	+	+
Sodium Sulphate	Na ₂ SO ₄	s	+	+	+	+	+	+	+	+	+
Sodium Sulphide	Na ₂ S	s	+	+	+	+	+	+	+	+	+
Sodium Sulphite	Na ₂ SO ₃	s	+	+	+	+	50%	+	+	+	50%
Sodium Tetraborate	Na ₂ B ₄ O ₇ * 10H ₂ O	s	+	+	+	+	+	+	+	+	+
Sodium Thiosulphate	Na ₂ S ₂ O ₃	s	+	+	+	+	25%	+	+	+	25%
Sodium Tripolyphosphate	Na ₅ P ₃ O ₁₀	s	+	+	+	+	+	+/o	+	+	+
Starch	(C ₆ H ₁₀ O ₅) _n	s	+	+	+	+	+	+	n	+	+
Starch Gum		s	+	+	+	+	+	+	+	+	+
Styrene	C ₆ H ₅ CHCH ₂	100%	-	-	o	+	+	o	-	o	+
Sublimate =>	Mercury-II-Chloride										
Succinic Acid	C ₄ H ₆ O ₄	s	+	+	+	+	+	+	+	+	+
Sugar Syrup		s	+	+	+	+	+	+	+	+	+
Sulphur Chloride =>	Disulphur Dichloride										
Sulphuric Acid	H ₂ SO ₄	98%	30%	50%	85%	+	20%	+	+	80%	+
Sulphurous Acid	H ₂ SO ₃	s	+	+	+	+	10%	+	+	+	+
Sulphuryl Chloride	SO ₂ Cl ₂	100%	-	-	-	o	n	+	o	-	n
Tannic Acid	C ₇₆ H ₅₂ O ₄₆	50%	+	+	+	+	+	+	+	+	+
Tartaric Acid	C ₄ H ₆ O ₆	s	50%	+	+	+	+	+	+/o	+	+
Tetrachloroethane	C ₂ H ₂ Cl ₄	100%	-	-	o	+	+	o	-	o	+
Tetrachlorinethylene	C ₂ Cl ₄	100%	-	-	o	+	+	o	-	o	+
Tetrachloromethane =>	Carbon Tetrachloride										
Tetrahydrofurane	C ₄ H ₈ O	100%	-	-	o	o	+	-	-	o	+
Tetrahydronapthalene	C ₁₀ H ₁₂	100%	-	-	-	+	+	+	-	o	+
Tetralin =>	Tetrahydro Naphthalene										

ProMinent® Chemical Resistance List

Resistance Of Materials Used In Liquid Ends To The Chemicals Most Frequently Used

Chemical	Formula	Conc	Acrylic	PVC	PP	PVDF	1.4571	FPM	EPDM	PE	2.4819
THF =>	Tetrahydrofurane										
Thionyl Chloride	SOCl ₂	100%	-	-	-	+	n	+	+	-	n
Thiophene	C ₄ H ₄ S	100%	n	-	o	n	+	-	-	o	+
Tin-II-Chloride	SnCl ₂	s	+	o	+	+	-	+	+	+	+/o
Tin-II-Sulphate	SnSO ₄	s	n	+	+	+	+	+	+	+	+/o
Tin-IV-Chloride	SnCl ₄	s	n	+	+	+	-	+	+	+	+
Titanium Tetrachloride	TiCl ₄	100%	n	n	n	+	n	o	-	n	n
Toluene	C ₆ H ₅ CH ₃	100%	-	-	o	+	+	o	-	o	+
Toluene Diisocyanate	C ₇ H ₃ (NCO) ₂	100%	n	n	+	n	+	-	+/o	+	+
Tributylphosphate	(C ₄ H ₉) ₃ PO ₄	100%	n	-	+	+	+	-	+	+	+
Trichloroethane	CCl ₃ CH ₃	100%	-	-	o	+	+	+	-	o	+
Trichloroethylene	C ₂ HCl ₃	100%	-	-	o	+	+/o	o	-	o	+
Trichloromethane =>	Chloroform										
Trichloroacetaldehyde Hydrate	CCl ₃ CH(OH) ₂	s	-	-	o	-	+	o	o	+	+
Trichloroacetic Acid	CCl ₃ COOH	50%	-	+	+	+	-	-	o	+	+
Tricresyl Phosphate	(C ₇ H ₇) ₃ PO ₄	90%	-	-	+	n	+	o	+	+	+
Triethanol Amine	N(C ₂ H ₄ OH) ₃	100%	+	o	+	+	+	-	+/o	+	+
Trilene =>	Trichloro Ethane										
Trioctyl Phosphate	(C ₈ H ₁₇) ₃ PO ₄	100%	n	-	+	+	+	o	+	+	+
Trisodium Phosphate	Na ₃ PO ₄	s	+	+	+	+	+	+	+	+	+
Urea	CO(NH ₂) ₂	s	+	+/o	+	+	+	+	+	+	+
Vinyl Acetate	CH ₂ =CHOOCCH ₃	100%	-	-	+	+	+	n	n	+	+
Water Glass =>	Sodium Silicate										
Xylene	C ₆ H ₄ (CH ₃) ₂	100%	-	-	-	+	+	o	-	o	+
Zinc Acetate	(CH ₃ COO) ₂ Zn	s	+	+	+	+	+	-	+	+	+
Zinc Chloride	ZnCl ₂	s	+	+	+	+	-	+	+	+	n
Zinc Sulphate	ZnSO ₄	s	+	+	+	+	+	+	+	+	+/o