

Industry Standards Downloadable Guides

# Chemical Compatibility Charts - Plastics

Allvalves Online Technical Support



Technical Support Document

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## Chemical resistance of common plastics used in valves.

The information in these tables is offered as a general guide only to the chemical resistance of commonly used materials in the construction of PLASTIC valves.

These tables are not to be used as an absolute recommendation as there are too many factors that can influence the corrosion resistance, such as temperature, temperature fluctuations, concentrations and solutions, velocity and abrasion. Allvalves Online Ltd therefore accept no responsibility for any problems arising from use of these tables. We recommend that if any doubt exists as to the resistance of a material to a specific chemical, that tests be carried out to verify the compatibility.

### What the ratings mean:

Ratings are based on media at ambient/ room temperature unless otherwise stated.

- + EXCELLENT RESISTANCE - Material unaffected or insignificantly affected
- 0 CONDITIONAL RESISTANCE - Media can attack the material or cause swelling, pressure and/or temperature restrictions must be made and the serviceable life of the valve can be noticeably reduced.
- - DO NOT USE, NO RESISTANCE - can not be used at all.

Abbreviations for seal materials used in the tables:





Aggressive media				Chemical resistance												
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM	
Acetaldehyde	CH <sub>3</sub> -CHO		40 %, aqueous solution	20	0	-	-	++	+	-	++	++	-	++	+	
				40	-	-	-	++	+	-	++	++	-	++	+	
				60	-	-	-	0	+	+	+	0	0	+	+	+
				80	-	-	-	0	+	+	+	0	0	+	+	+
				100	-	-	-	0	+	+	+	0	0	+	+	+
Acetaldehyde	CH <sub>3</sub> -CHO	21	technically pure	20	-	-	-	+	0	-	+	0	-	-	0	
				40	-	-	-	+	0	-	+	0	-	-	0	
				60	-	-	-	+	0	-	+	0	-	-	0	
				80	-	-	-	+	0	-	+	0	-	-	0	
				100	-	-	-	+	0	-	+	0	-	-	0	
Acetic acid	CH <sub>3</sub> COOH		50 %, aqueous	20	+	+	-	+	+	+	+	0	-	0	0	
				40	+	+	-	+	+	+	+	0	-	0	0	
				60	0	+	-	+	+	+	+	0	-	0	0	
				80	0	+	-	+	+	+	+	0	-	0	0	
				100	0	+	-	+	+	+	+	0	-	0	0	
Acetic acid	CH <sub>3</sub> COOH	118	technically pure, glacial	20	0	-	-	+	+	+	+	-	-	0	0	
				40	-	-	-	+	+	+	+	-	-	0	0	
				60	-	-	-	0	0	0	0	-	-	0	0	
				80	-	-	-	0	0	0	0	-	-	0	0	
				100	-	-	-	0	0	0	0	-	-	0	0	
Acetic acid anhydride	(CH <sub>3</sub> -CO) <sub>2</sub> O	139	technically pure	20	-	-	-	+	+	-	0	-	-	-	+	
				40	-	-	-	0	0	-	0	-	-	-	+	
				60	-	-	-	0	0	-	0	-	-	-	+	
				80	-	-	-	0	0	-	0	-	-	-	+	
				100	-	-	-	0	0	-	0	-	-	-	+	
Acetic acid ethylester	CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub>	77	technically pure	20	-	-	-	+	+	+	+	0	0	0	0	
				40	-	-	-	+	+	+	+	0	0	0	0	
				60	-	-	-	+	+	+	+	0	0	0	0	
				80	-	-	-	+	+	+	+	0	0	0	0	
				100	-	-	-	+	+	+	+	0	0	0	0	
Acetic acid isobutyl ester	(CH <sub>3</sub> ) <sub>2</sub> -CH-(CH <sub>2</sub> ) <sub>2</sub> -CO <sub>2</sub> H	117	technically pure	20	-	-	-	+	+	+	+	-	-	-	+	
				40	-	-	-	+	+	+	+	-	-	-	+	
				60	-	-	-	+	+	+	+	-	-	-	+	
				80	-	-	-	+	+	+	+	-	-	-	+	
				100	-	-	-	+	+	+	+	-	-	-	+	
Acetone	CH <sub>3</sub> -CO-CH <sub>3</sub>		up to 10 %, aqueous	20	-	-	0	+	+	0	+	0	-	+	0	
				40	-	-	0	+	+	0	+	0	-	+	0	
				60	-	-	0	+	+	0	+	0	-	+	0	
				80	-	-	0	+	+	0	+	0	-	+	0	
				100	-	-	0	+	+	0	+	0	-	+	0	
Acetone	CH <sub>3</sub> -CO-CH <sub>3</sub>	56	technically pure	20	-	-	-	+	+	-	+	-	-	-	0	
				40	-	-	-	+	+	-	+	-	-	-	0	
				60	-	-	-	+	+	-	+	-	-	-	0	
				80	-	-	-	+	+	-	+	-	-	-	0	
				100	-	-	-	+	+	-	+	-	-	-	0	







Aggressive media					Chemical resistance										
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
Calcium salts, aqueous, inorganic			≤ Saturated acid	20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	+
				60	+	+	+	+	+	+	+	+	+	+	+
				80	+	+	+	+	+	+	+	+	+	+	+
				100	+	+	+	+	+	+	+	+	+	+	+
				120	+	+	+	+	+	+	+	+	+	+	+
Carbon dioxide	CO <sub>2</sub>		technically pure, anhydrous	20	+	+		+	+	+	+	+	+	+	+
				40	+	+		+	+	+	+	+	+	+	+
				60	+	+		+	+	+	+	+	+	+	+
				80	+	+		+	+	+	+	+	+	+	+
				100	+	+		+	+	+	+	+	+	+	+
				140	+	+		+	+	+	+	+	+	+	+
Carbon tetrachloride	CCl <sub>4</sub>	77	technically pure	20	-	-	-	-	-	+	-	+	-	-	-
				40	-	-	-	-	-	+	-	+	-	-	-
				60	-	-	-	-	-	+	-	+	-	-	-
				80	-	-	-	-	-	+	-	+	-	-	-
				100	-	-	-	-	-	+	-	+	-	-	-
				140	-	-	-	-	-	+	-	+	-	-	-
Carbonic acid	H <sub>2</sub> CO <sub>3</sub>			20	+	+		+	+	+	+	+	+	+	
				40	+	+		+	+	+	+	+	+	+	
				60	+	+		+	+	+	+	+	+	+	
				80	+	+		+	+	+	+	+	+	+	
				100	+	+		+	+	+	+	+	+	+	
				140	+	+		+	+	+	+	+	+	+	
Caro's acid	H <sub>2</sub> SO <sub>5</sub>			20	+	0				-		+			
				40	+	0						+			
				60	+	0									
				80	+	0									
				100	+	0									
				140	+	0									
Caustic potash solution (potassium hydroxide)	KOH	131	50 %, aqueous	20	+	0		+	+	-	+	-	0	0	
				40	+	0		+	+	-	+	-	0	0	
				60	0	0		+	0	+	0	0	0	0	
				80	0	0		+	0	+	0	0	0	0	
				100	0	0		+	0	+	0	0	0	0	
				140	0	0		+	0	+	0	0	0	0	
Caustic soda solution	NaOH		50 %, aqueous	20	+	0		+	+	-	+	-	0	-	
				40	+	-		+	+	-	+	-	0	-	
				60	+	-		+	0	+	-	0	-	+	
				80	+	-		+	0	+	-	0	-	+	
				100	+	-		+	0	+	-	0	-	+	
				140	+	-		+	0	+	-	0	-	+	
Chloric acid	HClO <sub>3</sub>		10 %, aqueous	20	+	+	-	+	-	+	+	+	-	-	
				40	+	+	-	+	-	+	+	+	-	-	
				60	0	+	-	+	-	+	+	+	-	-	
				80	0	+	-	+	-	+	+	+	-	-	
				100	0	+	-	+	-	+	+	+	-	-	
				140	0	+	-	+	-	+	+	+	-	-	
Chloric acid	HClO <sub>3</sub>		20 %, aqueous	20	+	+	-	0	-	+	0	+	-	-	
				40	+	+	-	0	-	0	+	+	-	-	
				60	0	+	-	0	-	0	+	+	-	-	
				80	0	+	-	0	-	0	+	+	-	-	
				100	0	+	-	0	-	0	+	+	-	-	
				140	0	+	-	0	-	0	+	+	-	-	





Aggressive media				Chemical resistance											
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
Calcium salts, aqueous, inorganic			≤ Saturated acid	20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	+
				60	+	+	+	+	+	+	+	+	+	+	+
				80	+	+	+	+	+	+	+	+	+	+	+
				100	+	+	+	+	+	+	+	+	+	+	+
				120	+	+	+	+	+	+	+	+	+	+	+
Carbon dioxide	CO <sub>2</sub>		technically pure, anhydrous	20	+	+		+	+	+	+	+	+	+	+
				40	+	+		+	+	+	+	+	+	+	+
				60	+	+		+	+	+	+	+	+	+	+
				80	+	+		+	+	+	+	+	+	+	+
				100	+	+		+	+	+	+	+	+	+	+
				120	+	+		+	+	+	+	+	+	+	+
Carbon tetrachloride	CCl <sub>4</sub>	77	technically pure	20	-	-	-	-	-	+	-	+	-	-	-
				40	-	-	-	-	-	+	-	+	-	-	-
				60	-	-	-	-	-	+	-	+	-	-	-
				80	-	-	-	-	-	+	-	+	-	-	-
				100	-	-	-	-	-	+	-	+	-	-	-
				120	-	-	-	-	-	+	-	+	-	-	-
Carbonic acid	H <sub>2</sub> CO <sub>3</sub>			20	+	+		+	+	+	+	+	+	+	
				40	+	+		+	+	+	+	+	+	+	
				60	+	+		+	+	+	+	+	+	+	
				80	+	+		+	+	+	+	+	+	+	
				100	+	+		+	+	+	+	+	+	+	
				120	+	+		+	+	+	+	+	+	+	
Caro's acid	H <sub>2</sub> SO <sub>5</sub>			20	+	0				-		+			
				40	+	0				-		+			
				60	+	0				-		+			
				80	+	0				-		+			
				100	+	0				-		+			
				120	+	0				-		+			
Caustic potash solution (potassium hydroxide)	KOH	131	50 %, aqueous	20	+	0		+	+	-	+	-	0	0	
				40	+	0		+	+	-	+	-	0	0	
				60	0			+	0	-	+	-	0	0	
				80	0			+	0	-	+	-	0	0	
				100	0			+	0	-	+	-	0	0	
				120	0			+	0	-	+	-	0	0	
Caustic soda solution	NaOH		50 %, aqueous	20	+	0		+	+	-	+	-	0	-	
				40	+	0		+	+	-	+	-	0	-	
				60	+	0		+	0	-	+	-	0	-	
				80	+	0		+	0	-	+	-	0	-	
				100	+	0		+	0	-	+	-	0	-	
				120	+	0		+	0	-	+	-	0	-	
Chloric acid	HClO <sub>3</sub>		10 %, aqueous	20	+	+	-	+	-	+	+	+	-	-	
				40	+	+	-	+	-	+	+	+	-	-	
				60	0	+	-	+	-	+	+	+	-	-	
				80	0	+	-	+	-	+	+	+	-	-	
				100	0	+	-	+	-	+	+	+	-	-	
				120	0	+	-	+	-	+	+	+	-	-	
Chloric acid	HClO <sub>3</sub>		20 %, aqueous	20	+	+	-	0	-	+	0	+	-	-	
				40	+	+	-	0	-	+	0	+	-	-	
				60	0	+	-	0	-	+	+	+	-	-	
				80	0	+	-	0	-	+	+	+	-	-	
				100	0	+	-	0	-	+	+	+	-	-	
				120	0	+	-	0	-	+	+	+	-	-	







Aggressive media				Chemical resistance											
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
Cyclohexanone	C <sub>6</sub> H <sub>10</sub> O	155	technically pure	20	-	-	-	O	O	O	O	-	-	-	-
				40	-	-	-	O	O	O	-	-	-	-	
				60	-	-	-	O	O	O	-	-	-	-	
				80	-	-	-	O	O	O	-	-	-	-	
				100	-	-	-	O	O	O	-	-	-	-	
Dextrine	(C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>n</sub>		usual commercial	20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	
				60	+	+	+	+	+	+	+	+	+	+	
				80	+	+	+	+	+	+	+	+	+	+	
				100	+	+	+	+	+	+	+	+	+	+	
Di isobutyl ketone	[(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> ] <sub>2</sub> CO	124	technically pure	20	-	-	-	+	+	+	O	-	-	-	-
				40	-	-	-	O	O	O	O	-	-	-	-
				60	-	-	-	O	O	O	O	-	-	-	-
				80	-	-	-	O	O	O	O	-	-	-	-
				100	-	-	-	O	O	O	O	-	-	-	-
Dibrombenzene	C <sub>6</sub> H <sub>4</sub> Br <sub>2</sub>		≤ Saturated acid	20	-	-	-	O	O	+	O	+	-	-	-
				40	-	-	-	O	O	+	O	+	-	-	-
				60	-	-	-	O	O	+	O	+	-	-	-
				80	-	-	-	O	O	+	O	+	-	-	-
				100	-	-	-	O	O	+	O	+	-	-	-
Dibutyl ether	C <sub>4</sub> H <sub>9</sub> OC <sub>4</sub> H <sub>9</sub>	142	technically pure	20	-	-	-	O	O	+	-	+	+	-	O
				40	-	-	-	O	O	+	-	+	+	-	O
				60	-	-	-	O	O	+	-	+	+	-	O
				80	-	-	-	O	O	+	-	+	+	-	O
				100	-	-	-	O	O	+	-	+	+	-	O
Dibutyl phthalate	C <sub>6</sub> H <sub>4</sub> (COOC <sub>4</sub> H <sub>9</sub> ) <sub>2</sub>	340	technically pure	20	-	-	-	+	+	+	O	O	-	-	-
				40	-	-	-	O	O	+	O	-	-	-	
				60	-	-	-	O	O	+	O	-	-	-	
				80	-	-	-	O	O	+	O	-	-	-	
				100	-	-	-	O	O	+	O	-	-	-	
Dichloroacetic acid	Cl <sub>2</sub> CHCOOH		50 %, aqueous	20	+	-	-	+	+	+	+	O	-	+	O
				40	+	-	-	+	+	+	+	O	-	+	O
				60	O	-	-	O	O	+	+	-	-	+	O
				80	O	-	-	O	O	+	+	-	-	+	O
				100	O	-	-	O	O	+	+	-	-	+	O
Dichloroacetic acid	Cl <sub>2</sub> CHCOOH	194	technically pure	20	+	-	-	+	+	+	+	O	-	-	O
				40	+	-	-	+	+	+	+	O	-	-	O
				60	O	-	-	O	O	+	+	-	-	-	O
				80	O	-	-	O	O	+	+	-	-	-	O
				100	O	-	-	O	O	+	+	-	-	-	O
Dichloroacetic acid methyl ester	Cl <sub>2</sub> CHCOOCH <sub>3</sub>	143	technically pure	20	-	-	-	+	+	O	+	-	-	-	+
				40	-	-	-	+	+	+	+	-	-	-	+
				60	-	-	-	+	+	+	+	-	-	-	+
				80	-	-	-	+	+	+	+	-	-	-	+
				100	-	-	-	+	+	+	+	-	-	-	+



Aggressive media					Chemical resistance										
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
					20	40	60	80	100	120	140				
Dichlorobenzene	<chem>C6H4Cl2</chem>	180	technically pure	20	-	-	-	O	O	+	O	+	O	O	O
				40	-	-	-	O	O	+	O	+	O	O	O
				60	-	-	-	O	O	+	O	+	O	O	O
				80	-	-	-	O	O	+	O	+	O	O	O
				100	-	-	-	O	O	+	O	+	O	O	O
				120	-	-	-	O	O	+	O	+	O	O	O
				140	-	-	-	O	O	+	O	+	O	O	O
Dichloroethylene	<chem>ClCH=CHCl</chem>	60	technically pure	20	-	-	-	-	-	+	-	O	-	-	-
				40	-	-	-	-	-	+	-	O	-	-	-
				60	-	-	-	-	-	+	-	O	-	-	-
				80	-	-	-	-	-	+	-	O	-	-	-
				100	-	-	-	-	-	+	-	O	-	-	-
				120	-	-	-	-	-	+	-	O	-	-	-
				140	-	-	-	-	-	+	-	O	-	-	-
Diesel oil				20	+	+	-	+	O	+	-	+	+	O	O
				40	+	+	-	+	O	+	-	+	+	O	O
				60	+	+	-	+	O	+	-	+	+	O	O
				80	+	+	-	+	O	+	-	+	+	O	O
				100	+	+	-	+	O	+	-	+	+	O	O
				120	+	+	-	+	O	+	-	+	+	O	O
				140	+	+	-	+	O	+	-	+	+	O	O
Diethyl ether	<chem>H5C2-O-C2H5</chem>	35		20	-	-	-	-	-	-	-	-	-	-	-
				40	-	-	-	-	-	-	-	-	-	-	-
				60	-	-	-	-	-	-	-	-	-	-	-
				80	-	-	-	-	-	-	-	-	-	-	-
				100	-	-	-	-	-	-	-	-	-	-	-
				120	-	-	-	-	-	-	-	-	-	-	-
				140	-	-	-	-	-	-	-	-	-	-	-
Diethylamine	<chem>(C2H5)2NH</chem>	56	technically pure	20	-	-	+	+	+	O	-	-	-	-	-
				40	-	-	+	+	+	O	-	-	-	-	-
				60	-	-	+	+	+	O	-	-	-	-	-
				80	-	-	+	+	+	O	-	-	-	-	-
				100	-	-	+	+	+	O	-	-	-	-	-
				120	-	-	+	+	+	O	-	-	-	-	-
				140	-	-	+	+	+	O	-	-	-	-	-
Dimethyl formamide	<chem>(CH3)2CHNO</chem>	153	technically pure	20	-	-	-	+	+	-	O	-	O	+	+
				40	-	-	-	+	+	-	O	-	O	+	+
				60	-	-	-	+	+	-	O	-	O	+	+
				80	-	-	-	+	+	-	O	-	O	+	+
				100	-	-	-	+	+	-	O	-	O	+	+
				120	-	-	-	+	+	-	O	-	O	+	+
				140	-	-	-	+	+	-	O	-	O	+	+
Dimethylamine	<chem>(CH3)2NH</chem>	7	technically pure	20	-	-	-	+	-	-	O	-	-	-	-
				40	-	-	-	+	-	-	O	-	-	-	-
				60	-	-	-	+	-	-	O	-	-	-	-
				80	-	-	-	+	-	-	O	-	-	-	-
				100	-	-	-	+	-	-	O	-	-	-	-
				120	-	-	-	+	-	-	O	-	-	-	-
				140	-	-	-	+	-	-	O	-	-	-	-
Dioxane	<chem>C4H8O2</chem>	101	technically pure	20	-	-	-	+	O	-	O	-	O	-	-
				40	-	-	-	+	O	-	O	-	O	-	-
				60	-	-	-	+	O	-	O	-	O	-	-
				80	-	-	-	+	O	-	O	-	O	-	-
				100	-	-	-	+	O	-	O	-	O	-	-
				120	-	-	-	+	O	-	O	-	O	-	-
				140	-	-	-	+	O	-	O	-	O	-	-
Ethanolamine	<chem>C2H7NO</chem>			20	-	-	-	+	+	O	+	O	O	O	O
				40	-	-	-	+	+	O	+	O	O	O	O
				60	-	-	-	+	+	O	+	O	O	O	O
				80	-	-	-	+	+	O	+	O	O	O	O
				100	-	-	-	+	+	O	+	O	O	O	O
				120	-	-	-	+	+	O	+	O	O	O	O
				140	-	-	-	+	+	O	+	O	O	O	O















Aggressive media				Chemical resistance											
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
					Mixed acids - sulphuric - nitric - water	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> H <sub>2</sub> O		10 % 20 % 70 %	20 40 60 80 100 120 140	+	+	-	+	-	+
Mixed acids - sulphuric - nitric - water	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> H <sub>2</sub> O		50 % 33 % 17 %	20 40 60 80 100 120 140	+	+	-	-	-	+	-	+	-	-	O
Mixed acids - sulphuric - nitric - water	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> H <sub>2</sub> O		50 % 31 % 19 %	20 40 60 80 100 120 140	+	O	-	-	-	+	-	+	-	O	O
Mixed acids - sulphuric - nitric - water	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> H <sub>2</sub> O		10 % 87 % 43 %	20 40 60 80 100 120 140	-	-	-	-	-	O	-	-	-	-	-
Mixed acids - sulphuric - nitric - water	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> H <sub>2</sub> O		48 % 49 % 43 %	20 40 60 80 100 120 140	+	+	-	-	-	+	-	+	-	-	-
Mixed acids - sulphuric - phosphoric - phosphoric	H <sub>2</sub> SO <sub>4</sub> H <sub>3</sub> PO <sub>4</sub> H <sub>2</sub> O		30 % 60 % 10 %	20 40 60 80 100 120 140	+	+	-	+	+	+	+	+	-	+	+
N,N-Dimethylaniline	C <sub>9</sub> H <sub>9</sub> N(CH <sub>3</sub> ) <sub>2</sub>	194	technically pure	20 40 60 80 100 120 140	-	-	-	+	+	+	+	-	-	-	-
N-Methylpyrrolidon	C <sub>5</sub> H <sub>9</sub> NO	204		20 40 60 80 100 120 140	-	-	-	+	+	O	+	O	-	-	-
Naphthalene	C <sub>10</sub> H <sub>8</sub>	218	technically pure	20 40 60 80 100 120 140	-	-	-	+	+	+	-	+	+	-	O













Aggressive media				Chemical resistance											
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
Pyridine	C <sub>5</sub> H <sub>5</sub> N	115	technically pure	20	-	-	-	+	0	+	0	-	-	-	-
				40	-	-	-	+	0	+	0	-	-	-	-
				60	-	-	-	+	0	+	0	-	-	-	-
				80	-	-	-	+	0	+	0	-	-	-	-
				100	-	-	-	+	0	+	0	-	-	-	-
				120	-	-	-	+	0	+	0	-	-	-	-
				140	-	-	-	+	0	+	0	-	-	-	-
Salicylic acid	C <sub>6</sub> H <sub>4</sub> (OH)COOH		saturated	20	+	+		+	+	+	+	+	+	+	+
				40	+	+		+	+	+	+	+	+	+	+
				60	+	+		+	+	+	+	+	+	+	+
				80	+	+		+	+	+	+	+	+	+	+
				100	+	+		+	+	+	+	+	+	+	+
				120	+	+		+	+	+	+	+	+	+	+
				140	+	+		+	+	+	+	+	+	+	+
Sea water				20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	+
				60	0	+	+	+	+	+	+	+	+	+	+
				80	0	+	+	+	+	+	+	+	+	+	+
				100	0	+	+	+	+	+	+	+	+	+	+
				120	0	+	+	+	+	+	+	+	+	+	+
				140	0	+	+	+	+	+	+	+	+	+	+
Silicic acid	Si(OH) <sub>4</sub>			20	+	+		+	+	+	+	+	-	+	+
				40	+	+		+	+	+	+	+	-	+	+
				60	+	+		+	+	+	+	+	-	+	+
				80	+	+		+	+	+	+	+	-	+	+
				100	+	+		+	+	+	+	+	-	+	+
				120	+	+		+	+	+	+	+	-	+	+
				140	+	+		+	+	+	+	+	-	+	+
Silicone oil				20	+	+	+	+	+	+	+	+	+	+	+
				40	+	0	+	+	+	+	+	+	+	+	+
				60	-	+		+	+	+	+	+	+	0	+
				80	-	+		+	+	+	+	+	+	+	+
				100	-	+		+	+	+	+	+	+	+	+
				120	-	+		+	+	+	+	+	+	+	+
				140	-	+		+	+	+	+	+	+	+	+
Silver salts, aqueous, inorganic			≤ Saturated acid	20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+		+	+	+	+	+	+	+	+
				60	+	+		+	+	+	+	+	+	+	+
				80	+	+		+	+	+	+	+	+	+	+
				100	+	+		+	+	+	+	+	+	+	+
				120	+	+		+	+	+	+	+	+	+	+
				140	+	+		+	+	+	+	+	+	+	+
Sodium chlorite	NaClO <sub>2</sub>		diluted, aqueous	20	+	0		0	0	0	0	+	-	0	+
				40	+	0		0	0	0	0	+	-	0	+
				60	+	0		0	0	0	0	+	-	0	+
				80	+	0		0	0	0	0	+	-	0	+
				100	+	0		0	0	0	0	+	-	0	+
				120	+	0		0	0	0	0	+	-	0	+
				140	+	0		0	0	0	0	+	-	0	+
Sodium hypochlorite	NaOCl		12.5 % active chlorine, aqueous	20	+	0	-	0	0	0	+	0	-	-	+
				40	+	0	-	0	0	0	+	0	-	-	+
				60	+	0	-	0	0	0	+	0	-	-	+
				80	+	0	-	0	0	0	+	0	-	-	+
				100	+	0	-	0	0	0	+	0	-	-	+
				120	+	0	-	0	0	0	+	0	-	-	+
				140	+	0	-	0	0	0	+	0	-	-	+
Sodium persulphate	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>		cold saturated, aqueous	20	+	+		+	+	+	+	+	-	+	+
				40	+	+		+	+	+	+	+	-	+	+
				60	0	+		+	+	+	+	+	-	+	+
				80	+	+		+	+	+	+	+	-	+	+
				100	+	+		+	+	+	+	+	-	+	+
				120	+	+		+	+	+	+	+	-	+	+
				140	+	+		+	+	+	+	+	-	+	+













# Chemical Compatibility -Plastics

[www.allvalves.co.uk](http://www.allvalves.co.uk)

Aggressive media				Chemical resistance											
Medium	Formula	Boiling point °C	Concentration	Temperature °C	PVC-U	PVC-C	ABS	PE	PP-H	PVDF	EPDM	FPM	NBR	CR	CSM
Water, drinking, chlorinated			≤ 0.1 ppm Cl2	20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	+
				60	+	+	+	+	+	+	+	+	+	+	+
				80	+	+	+	+	+	+	+	+	+	+	+
				100	+	+	+	+	+	+	+	+	+	+	+
				120	+	+	+	+	+	+	+	+	+	+	+
Water - distilled - deionised	H <sub>2</sub> O	100		20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	
				60	+	+	+	+	+	+	+	+	+	+	
				80	+	+	+	+	+	+	+	+	+	+	
				100	+	+	+	+	+	+	+	+	+	+	
				120	+	+	+	+	+	+	+	+	+	+	
Xylene	C <sub>8</sub> H <sub>8</sub> (CH <sub>3</sub> ) <sub>2</sub>	138 - 144	technically pure	20	-	-	-	-	-	+	-	+	-	-	-
				40	-	-	-	-	-	+	-	+	-	-	-
				60	-	-	-	-	-	+	-	+	-	-	-
				80	-	-	-	-	-	+	-	+	-	-	-
				100	-	-	-	-	-	+	-	+	-	-	-
				120	-	-	-	-	-	+	-	+	-	-	-
Zinc salts, aqueous, inorganic			≤ Saturated acid	20	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+	
				60	+	+	+	+	+	+	+	+	+	+	
				80	+	+	+	+	+	+	+	+	+	+	
				100	+	+	+	+	+	+	+	+	+	+	
				120	+	+	+	+	+	+	+	+	+	+	

## Core Brands



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## Chemical Compatibility -Plastics

[www.allvalves.co.uk](http://www.allvalves.co.uk)

Allvalves can supply a wide range of plastic valves, fittings and pipe work systems, working with the leading brands, in a wide range of materials from PVC-U, ABS, CPVC,, PP-H and PVDF. Allvalves can offer ball and butterfly valves, diaphragm valves, pipe work including double wall pipe work. As a valve actuation specialist, Allvalves can offer electric and pneumatic actuated valves from stock.



### Actuated Plastic Valves



### In PVC, ABS, CPVC, PP + PVDF



### Pipe & fittings in PVC, ABS & more



### Lined valves available