Chemical Performance of PVC

Abbreviations
S Satisfactory Resistance
L Limited Resistance
U Unsatisfactory Resistance

dil.sol. dilute aqueous solution at a concentration equal to or less than 10%
sol. Aqueous solution at a concentration greater then10% but not saturated
sat.sol. saturated aqueous solution prepared at 20°C
tg-g technical grade, gas
tg-l technical grade, liquid
tg-s technical grade, solid
work.sol. working solution of the concentration usually used in the industry concerned
susp. Suspension of solid in a saturated solution at 20°C

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Acetaldehyde	CH_3CHO	20 60	40	U U
		20 60	100	U U
Acetic acid	CH_3COOH	20 60	up to 10	S S
		20 60	10 to 50	S L
-glacial		20 60	>96	U U
Acetic anhydride	$(CH_3CO)_2O$	20 60	100	U U
Acetone	CH_3COCH_3	20 60	10	U U
		20 60	100	U U
Acetonitrile		20 60		U U
Acetophenone	$CH_3COC_6H_5$	20 60	tg-s	U U
Acetyl nitrile		20 60		U U
Acetylene	C_2H_2	20 60	tg-g	S S
Acrylic acid ethyl ester		20 60		U U
Acrylonitrile	CH_2CHCN	20 60	techni- cally pure	 U
Adipic acid	$(CH_2CH_2CO_2H)_2$	20 60	sat. sol.	S L
Air		20 60	tg-g	S S
Allyl alcohol	CH_2CHCH_2OH	20 60	tg-l	L U

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Allyl chloride		20 60	 sat. sol	U U
Alum (Aluminium potassium sulphate)	$Al_2(SO_4)_3.K_2SO_4.nH_2O$	20 60	sat. sol	S S
Aluminium -chloride	$AlCl_3$	20 60	sat. sol.	S S
-fluoride	AlF_3	20 60	susp.	S S
-hydroxide	$Al(OH)_3$	20 60	susp.	S S
-nitrate	$Al(NO_3)_3$	20 60	sat. sol.	S S
-oxychloride		20 60	susp.	S S
-sulphate	$Al_2(SO_4)_3$	20 60	sat. sol.	S S
Ammonia aqueous	NH_3	20 60	sat. sol.	S S
dry gas		20 60	tg-g	S S
liquid		20 60	tg-l	L U
Ammonium -acetate	CH_3COONH_4	20 60		S S
-alum		20 60		S S
-benzoate		20 60		S
-bifluoride		20 60		S S
-bisulphate		20 60		S S
-carbonate	$(NH_4)_2CO_3$	20 60	sat. sol.	S S
-chloride	NH_4Cl	20 60	sat. sol.	S S
-dichromate		20 60		S S
-fluoride	NH_4F	20 60	25	S L
-hydrogen carbonate	NH_4HCO_3	20 60	sat. sol.	S S
-hydroxide	$NH_4(OH)$	20 60	35 m/v sol.	S S
-nitrate	NH_4NO_3	20 60	sat. sol.	S S
-persulphate	$(NH_4)_2S_2O_8$	20 60	sat. sol.	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Ammonium	$NH_4(HPO_4)_2$	20		S
-phosphate dibasic		60		S
-phosphate meta	$(NH_4)_4P_4O_{12}$	20	sat. sol.	S
		60		S
-phosphate tri	$(NH_4)_2HPO_4$	20		S
		60		S
-sulphate	$(NH_4)_2SO_4$	20	sat. sol.	S
		60		S
-sulphide	$(NH_4)_2S$	20	sat. sol.	S
		60		S
-thiocyanate		20	sat. sol.	S
		60		S
-zinc chloride		20		S
		60		S
Amyl acetate	$CH_3CO_2CH_2(CH_2)_3CH_3$	20	tg-l	U
		60		U
Amyl alcohol	$CH_3(CH_2)_3CH_2OH$	20	tg-l	S
		60		L
Amyl chloride	$CH_3(CH_2)_3CH_2Cl$	20	tg-l	U
		60		U
Aniline	$C_6H_5NH_2$	20	sat. sol.	U
		60	or tg-l	U
-chlorohydrate	$C_6H_5NH_2HCl$	20		U
		60		U
-hydrochloride		20	sat. sol.	U
		60		U
-sulphate		20		U
		60		U
Anthraquinone		20		S
		60		U
Anthraquinone sulphonic acid		20	susp.	S
		60		S
Antimony chloride	$SbCl_3$	20	sat. sol.	S
		60		S
Aqua regia	$HCl + HNO_3$	20		U
		60		U
Arsenic acid	H_3AsO_4	20	sat. sol. or	S
		60	weak conc.	L
Aryl sulphonic acids		20		S
		60		U
Barium	$BaBr_2$	20	sat. sol	S
-bromide		60		S
-carbonate	$BaCO_3$	20	susp.	S
		60		S
Barium	$BaCl_2$	20	sat. sol.	S
-chloride		60		S
-hydroxide	$Ba(OH)_2$	20	sat. sol.	S
		60		S
-nitrate	$Ba(NO_3)_2$	20		S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Barium	$BaSO_4$	20	susp.	S
		60		S
-sulphate				
-sulphide	BaS	20	sat. sol.	S
		60		S
Beer		20	work	S
		60	sol.	S
Benzaldehyde	C_6H_5CHO	20		U
		60		U
Benzalkonium chloride		20		S
Benzene	C_6H_6	20	tg-l	U
		60		U
Benzoic acid	C_6H_5COOH	20	sat. sol.	L
		60		U
Benzoyl chloride		20	tg-l	U
Benzyl acetate		20		U
		60		U
Bismuth carbonate		20	sat. sol.	S
		60		S
Boric acid	H_3BO_3	20	sat. sol.	S
		60		L
Boron trifluoride	BF_3	20	sat. sol.	S
Brine		20	work	S
		60	sol.	S
Bromic acid	$HBrO_3$	20	10	S
		60		S
Bromine	Br_2	20	tg-g	U
		60		U
		20	tg-l	U
		60		U
		20	trace	L
		60		U
Bromobenzene		20		U
		60		U
Bromoethane		20	tg-l	U
		60		U
Bromotoluene		20		U
		60		U
Butadiene	C_4H_6	20	tg-g	S
		60		S
Butane	C_4H_{10}	20	tg-g	S
		60		S
Butanediols	$CH_3CH_2CHOHCH_2OH$	20	10	S
		60		U
		20	conc.	L
		60		U
Butanols	C_4H_9OH	20	tg-l	S
(butyl alcohols)		60		L
Butyl acetate	$CH_3CO_2CH_2CH_2CH_2CH_3$	20	tg-l	U
		60		U
Butylene glycol	$C_4H_6(OH)_2$	60	100	L

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Butyl mercaptan		20 60		U U
Butylphenols	$C_4H_9C_6H_4OH$	20 60	sat. sol.	U U
Butyl phthalate		20 60	tg-l	U U
Butylstearate		20		S
Butynediol		20 60		S U
Butyric acid	$C_2H_5CH_2COOH$	20 60	20	S U
		20 60	tg-l	U U
Cadmium cyanide		20 60		S S
Calcium	$CaCO_3$	20 60	susp.	S S
-carbonate **-chlorate**	CaCHCl	20 60	sat. sol.	S S
-chloride	$CaCl_2$	20 60	sat. sol.	S S
-hydrogen sulphide (calcium bisulphide)	$Ca(HS)_2$	20 60	sol.	S S
-hydrogen sulphite (calcium bisulphite)	$Ca(HSO_3)_2$	20 60		S S
-hydroxide	$Ca(OH)_2$	20 60	sat. sol.	S S
-hypochlorite	$Ca(OCl)_2$	20 60	sat. sol.	S S
-nitrate	$Ca(NO_3)_2$	20 60	sat. sol.	S S
-sulphate	$CaSO_4$	20 60	susp.	S S
-sulphide	CaS	20 60	sat. sol.	S S
Carbitol		20		S
Carbon dioxide	CO_2	20 60	tg-g	S S
(gas) **(aqueous)**		20 60	sat. sol.	S S
Carbon disulphide	CS_2	20 60	tg-l	U U
Carbon monoxide	CO	20 60	tg-g	S S
Carbon tetrachloride **Carbon tetrachloride**	CCl_4	20 60	tg-l	U U
Carbonic acid	H_2CO_3	20 60	sat. sol.	S S
(aqueous) **(dry)**		20 60	100	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Carbonic acid (aqueous) (wet)		20 60		S L
Castor oil		20 60		S S
Caustic potash		20 60		S S
Cellosolve (2-ethoxyethanol)		20 60		S U
Cellosolve acetate		20		S
Chloral hydrate		20 60		S S
Chloramine		20	dil. sol.	S
Chloric acid	$HClO_3$	20 60	20	S L
Chlorine -dry gas	Cl_2	20 60	10	S L
		20 60	100	L U
Chloroacetic acid	$ClCH_2COH$	20 60	sol.	S L
Chloroacetyl chloride		20		S
Chlorobenzene		20 60	tg-l	U U
Chloroform	$CHCl_3$	20 60	tg-l	U U
Chloropicrin		20		U
Chloropropanes		20 60	tg-l	U U
Chlorosulphonic acid	$ClHSO_3$	20 60	tg-s	L U
Chrome alum	$KCr(SO_4)_2$	20 60	sol.	S S
Chromic acid (plating soln)	$CrO_3 + H_20$	20 60	10	S
		20 60	30	S
		20 60	50	S L
		20	sat. sol.	S
Chromic solution	$CrO_3 + H_20 + H_2SO_4$	20 60	50/35/15	S L
Citric acid	$C_3H_4(OH)(CO_2H)_3$	20 60	sat. sol.	S S
Copper -carbonate	$CuCO_3$	20 60		S S
Copper -chloride	$CuCl_2$	20 60	sat. sol.	S S
-cyanide	$CuCN_2$	20 60	sat. sol.	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Copper -fluoride	CuF_2	20 60		S S
-hypochlorite	$Cu(OCl)_2$	20 60		S S
-nitrate	$Cu(NO_3)_2$	20 60	sat. sol.	S S
-sulphate	$CuSO_4$	20 60	sat. sol.	S S
Cottonseed oil		20 60	work sol.	S S
Creosote		20 60		U U
Cresol	$CH_3C_6H_4OH$	20 60	$\leq$90	L U
		20 60	$\geq$90	U U
Cresylic acid	$CH_3C_6H_4COOH$	20 60	50	L U
Crotonaldehyde		20 60	sat. sol. or tg-l	U U
Crude oil		20 60	tg-l	S S
Cyclanone		20 60		S S
Cyclohexane	C_6H_{12}	20 60		U U
Cyclohexanol		20 60	sat. sol. or tg-s	U U
Cyclohexanone	$C_6H_{10}O$	20 60	tg-l	U U
Cyclohexyl alcohol		20 60		U U
DDT		20 60		U U
Detergents (synthetic)		20 60	dil	S S
Developers (photographic)		20 60	work sol.	S S
Dextrin	$C_6H_{12}OCH_2O$	20 60	sol.	S L
Dextrose		20 60	sol.	S S
Diacetone alcohol		22		S
Diazo salts		20 60		S S
Dibutoxyethyl phthalate		20 60		U U
Dibutyl phthalate	$C_6H_4(CO_2C_4H_9)_2$	20 60		U U
Dibutyl sebacate		20 60		S U

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Dichloroacetic acid	$Cl_2CHCOOH$	20 60	tg-l	U U
Dichlorobenzene		20 60	tg-l	U U
Dichloroethane **(ethylene dichloride)**	CH_2ClCH_2Cl	20 60	tg-l	U U
Dichloroethylene	$ClCH_2Cl$	20 60	tg-l	U U
Diesel fuels		20 60		S S
Diethyl ether	$C_2H_5OC_2H_5$	20 60		U U
Diethyl sulphate **(ethyl sulphate)**	$(C_2H_5)_2SO_4$	20 60		U U
Diglycolic acid	$(CH_2)_2O(CO_2H)_2$	20 60		S L
Dimethylamine	$(CH_3)_2NH$	20 60	100	L U
Dimethyl formamide		20 60		U U
Dimethylhydrazine		20 60		U U
Dimethyl sulphate **(methyl sulphate)**	$(CH_3)_2SO_4$	20 60		S U
Dioctyl phthalate		20 60	tg-l	U U
Dioxane		20 60	tg-l	U U
Diphenyl ether		20 60		U U
Dodecanoic acid **(lauric acid)**		20 60		S S
Emulsions **(photographic)**		20 60	work sol.	S S
Ethanol **(ethyl alcohol)**	CH_3CH_2OH	20 60	tg-l	S L
Ethers		20 60		U U
Ethyl **-acetate**	$CH_3CO_2C_2H_5$	20 60	tg-l	U U
-acrylate		20 60	tg-l	U U
-chloride	CH_3CH_2Cl	20 60	tg-g	U U
-chloroacetate		20 60		U U
-ether	$CH_3CH_2OCH_2CH_3$	20 60	tg-l	U U
Ethylene **-chlorohydrin**	$ClCH_2CH_2OH$	20 60	tg-l	U U

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Ethylene -dibromide		20 60		U U
Ethylene -glycol (ethanediol)	$HOCH_2CH_2OH$	20 60	tg-l	S S
-oxide (oxiran)		20 60		U U
Fatty acids		20 60		S S
Ferric -acetate	$Fe(CH_3COO)_3$	20 60		S U
-chloride	$FeCl_3$	20 60	sat. sol.	S S
-hydroxide	$Fe(OH)_3$	20 60		S S
-nitrate	$Fe(NO_3)_3$	20 60	sat. sol.	S S
-sulphate	$Fe(SO_4)_3$	20 60	sat. sol.	S S
Ferrous -chloride	$FeCl_2$	20 60	sat. sol.	S S
-hydroxide	$Fe(OH)_2$	20		S
-nitrate	$FeNO_3$	20		S
-sulphate	$FeSO_4$	20 60	sat. sol.	S S
Fixing soln. (photographic)		20 60		S S
Fluoboric acid		20 60		S S
Fluorine	F_2	20 60	tg-g wet or dry	U U
Fluosilic acid	$HSiF_6$	20 60	sat. sol.	S S
Formaldehyde	HCOH	20 60	30-40%	S S
Formic acid	HCOOH	20 60	10	S S
		20 60	25	S L
		20 60	50	S L
		20 60	100	S U
Fructose		20 60		S S
Fuel oil		20 60		S S
Furfuraldehyde (furfural)		20 60		U U

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Furfuryl alcohol	$C_5H_3OCH_2OH$	20 60	tg-l	U U
Gas (manufactured)		20 60	tg-g	S L
Gas (natural,wet/dry)		20	tg-g	S
Gasoline (fuel)		20 60	work sol.	S S
Gelatine		20 60	sol.	S S
Glucose	$C_6H_{12}O_6$	20 60	sol.	S S
Glycerine	$HOCH_2CHOHCH_2OH$	20 60	tg-l	S S
Glycolic acid	$HOCH_2COOH$	20 60	30	S S
Heptane	C_7H_{16}	20 60	tg-l	S U
Hexadecanol (cetyl alcohol)		20 60	work sol.	S S
Hexane	C_6H_{14}	20 60		S L
Hexanol (hexyl alcohol)		20 60	tg-l	S S
Hydrazine		20 60	97	U U
Hydrobromic acid	HBr	20 60	up to 20	S L
		20 60	50	S L
Hydrochloric acid	HCl	20 60	≤25	S L
		20 60	≤37	S S
Hydrocyanic acid	HCN	20 60	10	S S
Hydrofluoric acid	HF	20 60	up to 10	S S
		20 60	40	L U
		20 60	60	L U
Hydrogen	H_2	20 60		S S
-peroxide	H_2O_2	20 60	12	S S
		20 60	30	S S
		20 60	50	S S
		20 60	90	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Hydrogen -sulphide	H_2S	20 60	tg-g	S S
Hydroquinone (quinol)		20 60	sat. sol.	S S
Hydrosulphite		20 60	≤10	S L
Hydroxylamine sulphate	$(H_2NOH)_2H_2SO_4$	20 60	12	S S
Hydrochlorous acid		20		L
Hypochlorite		20		S
Hypochlorous acid		20 60		S S
Iodine (soln in potassium iodide) (soln in alcohol)	I_2	20 60	sat. sol.	U U
		20 60	tg-l	U U
Isobutyl alcohol		20 60	tg-l	S S
Iso-octane (2,2,4-trimethylbentane)	C_8H_{18}	20 60		S U
Isophorone		20 60		U U
Isopropyl -alcohol	$(CH_3)_2CHOH$	20 60	tg-l	S S
-ether	$(CH_3)_2CHOCH(CH_3)_2$	20 60		L U
Kerosene		20 60		S S
Lactic acid	$CH_3CHOHCOOH$	20 60	10	S L
		20 60	10 to 90	L U
Latex		20 60		S S
Lauryl chloride		20 60		S U
Lead -acetate	$Pb(CH_3COO)_2$	20 60	dil. or sat. sol.	S S
-arsenate		20 60		S S
-chloride	$PbCl_2$	20 60		S S
-nitrate	$PbNO_3$	20 60		S S
-sulphate	$PbSO_4$	20 60		S S
Linoleic acid		20 60		S S
Linoleic oil		20 60		S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Linseed oil		20 60	work sol.	S L
Lithium bromide		20 60		S S
Magnesium	$MgCO_3$	20 60	susp.	S S
-carbonate				
-chloride	$MgCl_2$	20 60	sat. sol.	S S
-citrate		20 60		S S
-hydroxide	$Mg(OH)_2$	20 60	sat. sol.	S S
-nitrate	$MgNO_3$	20 60	sat. sol.	S S
-sulphate	$MgSO_4$	20 60	sat. sol.	S S
Maleic acid	COOHCHCHOOH	20 60	25	S S
		20 60	50	S S
		20 60	sat. sol.	S L
Malic acid	$CH_2CHOH(COOH)_2$	20 60	sol. or sat. sol.	S S
Manganese		20 60		S S
-chloride				
-sulphate		20 60	10/20 or sat.	S S
Mercuric	$HgCl_2$	20 60	sat. sol.	S S
-chloride				
-cyanide	$HgCN_2$	20 60	sat. sol.	S S
Mercurous nitrate	$HgNO_3$	20 60		S S
Mercury	Hg	20 60	tg-l	S S
Mesityl oxide		20 60		U U
Methoxyethyl oleate		20 60		S S
Methyl	CH_3COOCH_3	20 60	tg-l	U U
-acetate				
-alcohol	CH_3OH	20 60	5	S S
(methanol)				
		20 60	tg-l	S L
-bromide	CH_3Br	20 60		U U
(bromomethane)				
-cellosolve		20 60		U

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Methyl -chloride (chloromethane)	CH_3Cl	20 60		U U
-ethyl ketone	$CH_3COCH_2CH_3$	20 60	tg-l	U U
-glycol		20 60		S S
-isobutyl ketone		20 60	tg-l	U U
-methacrylate		20 60	tg-l	U U
-salicylate		20		S
Methylamine	CH_3NH_2	20 60	32	L U
Methylated spirits		20 60		S L
Methylcyclohexanone		20 60		U U
Methylene -bromide	CH_2Br_2	20 60		U U
-chloride	CH_2Cl_2	20 60	tg-l	U U
-chlorobromide		20 60		U U
-iodine		20 60		U U
Methylsulphoric acid	CH_3COOSO_4	20 60	50/100	S L
Mineral oils		20 60	work sol.	S S
Molasses		20 60	work sol.	S L
Motor oils		20 60		S S
Muriatic acid		20 60		S S
Naphtha		20 60	work. sol.	U U
Naphthalene	$C_{10}H_8$	20 60		U U
Natural gas		20 60		S S
Nickel -acetate	$Ni(CH_3COO)_2$	20		S
-chloride	$NiCl_2$	20 60	sat. sol.	S S
-nitrate	$Ni(NO_3)_2$	20 60	sat. sol.	S S
-sulphate	$NiSO_4$	20 60	sat. sol.	S S
Nicotonic acid		20 60	susp.	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Nitric acid	HNO_3	20 60	up to 45%	S L
		20 60	>50%	U U
Nitrobenzene	$C_6H_5NO_2$	20 60	tg-l	U U
Nitroglycerin		20 60		U U
Nitroglycol		20 60		U U
Nitromethane		20		L
Nitropropane		20 60		U U
Nitrous fumes (moist)		20 60		L U
Nitrous oxide	N_2O	20 60		S U
Oils and fats		20 60	tg-l	S S
Oleic acid	$C_8H_{17}CHCH(CH_2)_7CO_2H$	20 60	tg-l	S S
Oleum		20 60		U U
Oxalic acid	HO_2CCO_2H	20 60	sat. sol.	S S
		20 60	dil. sol.	S L
Oxygen	O_2	20 60	tg-g	S S
Ozone	O_3	20 60	sat. sol.	S S
Palmitic acid	$CH_3(CH_2)_{14}COOH$	20 60	10	S S
		20 60	70	S S
Paraffin		20 60		S L
-emulsion/oil		20 60		S S
Peracetic acid		20 60		S U
Perchloric acid	$HClO_4$	20 60	10	S L
		20 60	70	L U
Perphosphate		20		S
Petrol		20 60		S U
-refined **-unrefined**		25 60		S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Petrol/benzene (mixture)		20 60	80:20	U U
Petroleum spirit (petroleum ether)		20 60		U U
Petroleum liquifier		22 60		S S
Petroleum oils		22 60		S U
Phenol	C_6H_5OH	20	1	S
		20 60	90	U U
Phenylhydrazine	$C_6H_5NHNH_2$	20 60	tg-l	U U
Phenylhydrazine hydrochloride	$C_6H_5NHNH_3Cl$	20 60	dil. sol.	U U
Phosgene (gas)		20 60		S U
(liquid)		20 60		U U
Phosphine		20 60	tg-g	S S
Phosphoric -acid	H_3PO_4	20 60	10	S S
		20 60	25	S S
		20 60	50	S S
		20 60	95	S S
-anhydride	P_2O_5	20 60		S L
Phosphorous	P_4	20 60		S U
-pentoxide	P_2O_5	20 60		S U
-trichloride	PCl_3	20 60	tg-l	U U
Phosphoryl chloride (phosphorus oxychloride)		20 60	tg-l	U U
Phthalic acid	$C_6H_4(CO_2H)_2$	20 60	50	 U
Picric acid:	$HO_6H_2(NO_2)_3$	20 60	1	S S
		20 60	$\geq$1	U U
Plating solutions: brass		20 60		S S
cadmium		20 60		S S
chromium		20 60		S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Plating solutions:		20		S
copper		60		S
gold		20		S
		60		S
indium		20		S
		60		S
lead		20		S
		60		S
nickel		20		S
		60		S
rhodium		20		S
		60		S
silver		20		S
		60		S
tin		20		S
		60		S
zinc		20		S
		60		S
Polyglycol ethers		20		U
		60		U
Potash		20		S
		60		S
Potassium		20		S
-alum		60		S
-borate	K_3BO_3	20	sat. sol.	S
		60		S
-bromate	$KBrO_3$	20	up to 10	S
		60		S
-bromide	KBr	20	sat. sol.	S
		60		S
-carbonate	K_2CO_3	20	sat. sol.	S
		60		S
-chlorate		20	sat. sol.	S
		60		S
-chloride	KCl	20	sat. sol.	S
		60		S
-cuprocyanide		20	sat. sol.	S
-chromate	K_2CrO_4	20	40	S
		60		S
-cuprocyanide		20	sat. sol.	S
		60		
-cyanide	KCN	20	sat. sol.	S
		60		S
-dichromate	$K_2Cr_2O_7$	20	40	S
(potassium bichromate)		60		S
		20	sat. sol.	S
-ferricyanide		20	sat. sol.	S
		60		S
-ferrocyanide	$K_4Fe(CN)_6.3H_2O$	20	sat. sol.	S
(potassium hexacyanoferrate (II))		60		S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Potassium	KF	20	sat. sol.	S
-fluoride		60		S
-hydrogen carbonate (potassium bicarbonate)		20	sat. sol.	S
		60		S
-hydrogen sulphate (potassium bisulphate)		20	sat. sol.	S
		60		S
-hydrogen sulphite (potassium bisulphite)		20	sol.	S
		60		S
-hydroxide	KOH	20	10	S
		60		S
		20	50	S
		60		S
		20	conc.	S
		60		S
-nitrate	KNO_3	20	sat. sol.	S
		60		S
-perborate	KBO_3	20		S
		60		S
-perchlorate		20	10	S
		60		S
-permanganate	$KMnO_4$	20	10	S
		60		S
		20	20	S
		60		S
		20	30	S
		60		S
-persulphate	$K_2S_2O_8$	20	sat. sol.	S
		60		L
-sulphate	K_2SO_4	20	sat. sol.	S
		60		S
-sulphide		20	sat. sol.	S
		60		S
-sulphite		20	sat. sol.	S
		60		S
-thiosulphate		20	sat. sol.	S
		60		S
Propane	C_3H_8	20		S
		60		S
Propylene		20		U
-dichloride		60		U
-oxide		20		U
		60		U
Pyridine	$CH(CHCH)_2N$	20		U
		60		U
Salicylic acid		20	sat. sol.	S
		60		S
Sea Water		20		S
		60		S
Sewage		20		S
		60		S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Silicic acid	H_2SiO_3	20 60		S S
Silver	$AgCH_3COO$	20 60	sat. sol.	S S
-acetate				
-cyanide	AgCN	20 60	sat. sol.	S S
-nitrate	$AgNO_3$	20 60	sat. sol.	S L
Soap solutions		20 60	sol.	S L
(aqueous soln.)				
Sodium	CH_3COONa	20 60		S S
-acetate				
-alum		20 60		S S
-antimonate		20 60	sat. sol.	S S
-arsenite		20 60	sat. sol.	S S
-benzoate		20 60		S L
-bicarbonate	$NaHCO_3$	20 60	sat. sol.	S S
(hydrogen carbonate)				
-bichromate		20 60		S S
(hydrogen chromate)				
-bisulphate	$NaHSO_4$	20 60	sat. sol.	S S
(hydrogen sulphate)				
-bisulphite	$NaHSO_3$	20 60	sat. sol.	S S
(hydrogen sulphite)				
-bromide	NaBr	20 60	sat. sol.	S S
-carbonate	Na_2CO_3	20 60	sat. sol.	S S
-chlorate	$NaClO_3$	20 60	sat. sol.	S S
-chloride	NaCl	20 60	sat. sol.	S S
-cyanide	NaCN	20 60	sat. sol.	S S
-dichromate		20 60		S S
-ferricyanide		20 60	sat. sol.	S S
-ferrocyanide	$Na_4Fe(CN)_6$	20 60	sat. sol.	S S
-fluoride	NaF	20 60	sat. sol.	S S
-hydrogen orthophosphate		20 60		S S
(di Sodium -)				
-hydroxide	NaOH	20 60	1 w/v	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Sodium -hydroxide		20 60	10 w/v	S S
		20 60	40 w/v	S S
		20 60	conc.	S S
-hypochlorite	NaOCl	20 60	13% Cl	S L
-metaphosphate		20 60		S S
-nitrate	$NaNO_3$	20 60	sat. sol.	S S
-nitrite	$NaNO_2$	20 60	sat. sol.	S S
-perborate	$NaBO_3.H_2O$	20 60		S S
-perchlorate		20 60		S S
-peroxide		20 60		S S
-phosphate di	$NaHPO_4$	20 60		S S
-phosphate tri	Na_3PO_4	20 60		S S
-silicate		20 60	sol.	S S
-sulphate	Na_2SO_4	20 60	dil. or sat. sol.	S S
-sulphide	Na_2S	20 60	dil.	S L
-sulphite	$NaSO_3$	20 60	sat. sol.	S L
-tetraborate (di Sodium-), 'Borax'		20 60		S S
-thiosulphate (sodium hyposulphite)	$Na_2S_3O_3$	20 60		S S
Stannic chloride (Tin (IV) chloride)	$SnCl_4$	20 60	sol.	S S
Stannous chloride (Tin (II) chloride)	$SnCl_2$	20 60	sat. sol.	S S
Starch		20 60		S S
Stearic acid	$CH_3(CH_2)_{16}CO_2H$	20 60		S S
Stoddard solvents		20 60		U U
Succinic acid		20 60		S S
Sucrose (sugar)		20 60	aq. sol.	S S

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Sulphamic acid		20	sol.	S
Sulphite liquors		20 60		S S
Sulphur	S	20 60		S S
Sulphur dioxide **(dry)**	SO_2	20 60		S S
(moist)		20 60		S U
(liquid)		20 60		L U
Sulphur trioxide	SO_3	20 60		S S
Sulphuric acid	H_2SO_4	20 60	up to 10	S S
		20 60	15	S S
		20 60	10 to 50	S S
		20 60	50 to 90	S L
		20 60	95	L U
		20 60	98	U U
		20 60	fuming	U U
-nitric aqueous soln.	$H_2SO_4 + HNO_3 + H_2O$	20 60	48/49/3	S L
		20 60	50/50/0	L U
		20 60	##########	S S
Sulphurous acid		20 60	10	S S
		20 60	30	S S
Tallow		20 60		S S
Tannic acid	$C_{14}H_{10}O_9$	20 60	sol.	S S
Tanning extracts		20 60		S S
Tartaric acid	$HOOC(CHOH)_2COOH$	20 60	sol. or sat. sol.	S S
Tetrachloroethane	$CHCl_2CHCl_2$	20 60		U U
Tetrachloroethylene **(Perchloroethylene)**	CCl_2CCl_2	20 60		U U
Tetraethyl lead **(lead tetraethyl)**	$Pb(C_2H_5)_4$	20 60	100	S L

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Tetrahydrofuran	C_4H_8O	20 60	tg-l	U U
Tetrahydronapthalene (tetralin)		20 60		U U
Tetrasodium pyrophosphate		20 60		S S
Thionyl chloride	$SOCl_3$	20 60	tg-l	U U
Thiophene	C_4H_4S	20 60		U U
Tirpineol		20		S
Titanium tetrachloride		20 60		U U
Toluene	$C_6H_5CH_3$	20 60	tg-l	U U
Tributyl citrate		20		S
Tributyl phosphate		20 60		U U
Trichloroacetic acid	CCl_3COOH	20 60	≤50	S U
Trichlorobenzene		20 60	work. sol.	U U
Trichloroethylene	Cl_2CCHCl	20 60	tg-l	U U
Triethanolamine	$N(CH_2CH_2OH)_2$	20 60	100	L U
Triethylamine		20 60		S L
Trigol (triethylene glycol)		20 60		S
3,4,5,-Trihydroxybenzoic acid (gallic acid)		20 60		S S
Trilon		20 60		U U
Trimethylamine		20 60		S U
Trimethylol propane (2-ethyl-2-hydroxymethylpropanediol)		20 60	up to 10%	S L
Trimethyl propane		20 60		S L
Trisodium phosphate		20 60		S S
Turpentine		20 60		S L
Urea	$CO(NH_2)_2$	20 60	≤10	S L
		20 60	33	S L

Chemical	Formula	Temp. (°C)	Conc. (%)	PVC
Uric acid	$C_5H_4N_4O_3$	20 60	10	S L
Urine		20 60		S
Vegetable oils		20 60		S S
Vinegar		20 60		S S
Vinyl acetate	$CH_3CO_2CHCH_2$	20 60	tg-l	U U
Water	H_2O	20 60		S S
Whiskey		20 60	work sol.	S S
White liquor		20 60		S S
Wines and spirits		20 60	work sol.	S S
Xylene	C_8H_{10}	20 60	tg-l	U U
Yeast		20 60	susp.	S L
Zinc -carbonate	$ZnCO_3$	20 60	susp.	S S
-chloride	$ZnCl_2$	20 60	dil. or sat. sol.	S S
-chromate	$ZnCrO_4$	20 60		S S
-cyanide	$Zn(CN)_2$	20 60		S S
-nitrate	$Zn(NO_3)_2$	20 60	sat. sol.	S S
-oxide	ZnO	20 60	susp.	S S
-sulphate	$ZnSO_4$	20 60	dil. or sat. sol.	S S

Sources for Chemical Resistances of PVC

1. The Water Supply Manual for PVC Pipe Systems, First Edition, Vinidex Pty Limited, 1989
2. Chemical Resistance Guide For Thermoplastic Pipe and Fitting Systems, Vinidex Pty Limited
3. ISO/TR 10358 Technical Report: Plastic Pipes and Fittings-Combined Chemical-resistance Classification Table, First Edition, International Organisation for Standardisation, 1993
4. Chemical Resistance, Volume 1- Thermoplastics, Second Edition, Plastics Design Library, 1994
5. Chemical Resistance Data Sheets, Volume 1-Plastics, Rapra Technology Limited, 1993