



# Resistenze chimiche PVC

## U-PVC Chemical resistances

Le caratteristiche di resistenza chimica qui riportate sono indicative e desunte dalle tabelle ISO gruppo 3.

Variazioni nella composizione o particolari condizioni operative possono alterare la resistenza chimica dei materiali.

Chemical characteristics shown on this list are approximate and got from ISO group 3 tables.

Variations in the composition or special operating conditions could change the chemical resistance of materials.

AGENT REACTIVES	FORMULA CHIMICA CHEMICAL FORMULA	CONCENTRAZIONE CONCENTRATION	TEMPERATURA PVC U-PVC TEMPERATURE	
			20°C	60°C
acetaldehyde	CH <sub>3</sub> CHO	40%	NS	-
		100%	NS	-
acetic, anhydride	(CH <sub>3</sub> CO) <sub>2</sub> O	100%	NS	NS
acetic, acid	CH <sub>3</sub> COOH	glaciale	NS	NS
		25%	S	L
		60%	S	L
acetic, acid monochlore	CH <sub>3</sub> COOH	sol.	S	L
acetone	CH <sub>3</sub> CO CH <sub>3</sub>	100%	NS	NS
adipic acid	(CH <sub>2</sub> ) <sub>4</sub> (COOH) <sub>2</sub>	sol. sat.	S	L
allyl alcohol	CH <sub>2</sub> CH CH <sub>2</sub> OH	96%	L	NS
aluminium, chloride	Al Cl <sub>3</sub>	sol. sat.	S	S
aluminium hydroxide	Al(OH) <sub>3</sub>	all	S	S
aluminium nitrate	Al(NO <sub>3</sub> ) <sub>3</sub>	n.d.	S	S
aluminium, sulphate	Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	sol. sat.	S	S
aluminium, potassium sulphate	Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> K <sub>2</sub> SO <sub>4</sub>	sol. sat.	S	L
amyl acetate (1 pentanol-acetate)		100%	NS	NS
amyl, alcohol		100%	S	L
ammonia dry sec	NH <sub>3</sub>	100%	S	L
ammonia, liquid		sol. dil.	L	NS
ammonium, chloride	NH <sub>4</sub> Cl	sol. sat.	S	S
ammonium, fluoride	NH <sub>4</sub> F	20%	S	L
ammonium hydroxide	NH <sub>4</sub> OH	28%	S	L
ammonium, nitrate	NH <sub>4</sub> NO <sub>3</sub>	sol. sat.	S	S
ammonium, sulphate	(NH <sub>4</sub> ) <sub>2</sub> S	sol. sat.	S	S
aniline	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>	100%	NS	NS
		sol. sat.	NS	NS
aniline, hydrochloride	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub> H Cl	sol. sat.	NS	NS
antimony, (III) chloride	Sb Cl <sub>3</sub>	90%	S	S
anthraquinone sulphonic acid		sol.	S	L
argent nitrate		sol. sat.	S	L
arsenic, acid	H <sub>3</sub> A <sub>5</sub> O <sub>4</sub>	sol. dil.	S	-
barium carbonate	BaCO <sub>3</sub>	all	S	S
barium chloride	BaCl <sub>2</sub>	10%	S	S
barium hydroxide	Ba(OH) <sub>2</sub>	all	S	S
barium sulphate	BaSO <sub>4</sub>	n.d.	S	S
barium sulphide	BaS	sat.	S	S
benzaldehyde	C <sub>6</sub> H <sub>5</sub> CHO	0.1%	NS	NS
benzene	C <sub>6</sub> H <sub>6</sub>	100%	NS	NS
benzoic, acid	C <sub>6</sub> H <sub>5</sub> COOH	sol. sat.	L	NS
beer			S	S
borax		sol. sat.	S	L
boric, acid	H <sub>3</sub> BO <sub>3</sub>	sol. dil.	S	L
bromine, liquid	Br <sub>2</sub>	100%	NS	NS
bromhydric, acid	HBr	10%	S	L
		50%	S	L
		10%	S	-
bromic, acid			S	-
butadiene	C <sub>4</sub> H <sub>6</sub>	100%	S	S
butane, gas	C <sub>4</sub> H <sub>10</sub>	100%	S	-
butyl, acetate	(CH <sub>3</sub> ) <sub>3</sub> C-CH <sub>2</sub> -CO <sub>2</sub> -CH <sub>2</sub> CH <sub>3</sub>	100%	NS	NS
butyl, phenol	C <sub>4</sub> H <sub>3</sub> C <sub>6</sub> H <sub>4</sub> OH	100%	NS	NS
butylique, alcohol	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OH	up to 100%	S	L
butyric, acid	C <sub>2</sub> H <sub>5</sub> CH <sub>2</sub> COOH	20%	S	L
		98%	NS	NS
calcium carbonate	CaCO <sub>3</sub>	all	S	S
calcium, chloride	Ca Cl <sub>2</sub>	sol. sat.	S	S
calcium hydroxide	Ca(OH) <sub>2</sub>	all	S	S
calcium hypochlorite	Ca(OCl) <sub>2</sub>	sat.	S	L
calcium, nitrate	Ca (NO <sub>3</sub> ) <sub>2</sub>	50 %	S	S
calcium sulphate	CaSO <sub>4</sub>	n.d.	S	S
calcium sulphide	CaS	sat.	S	S
carbon, dioxide (dry gas)	CO <sub>2</sub>	100%	S	S
carbon, dioxide (wet gas)		sol. sat.	S	L
carbonique, anhydride (gas humid)		-	S	S
carbon monoxide	CO	100%	S	S
carbon, sulfure		100%	NS	NS
carbon, tetrachlorure		100%	NS	NS
cyclohexanol	C <sub>6</sub> H <sub>12</sub>	100%	NS	NS
cyclohexanone	C <sub>6</sub> H <sub>10</sub> O	100%	NS	NS
chlore	Cl <sub>2</sub>	sol. sat.	NS	NS
chloresulphonic, acid		100%	L	NS
chloridric, acid	HCl	20%	L	NS
		30%	S	L

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			20°C	60°C
chlorobenzene	C <sub>6</sub> H <sub>5</sub> Cl	all	NS	NS
chloroform	CHCl <sub>3</sub>	all	NS	NS
copper cyanide	CuCN <sub>2</sub>	all	NS	NS
copper nitrate	Cu(NO <sub>3</sub> ) <sub>2</sub>	n.d.	S	L
chromic, acid	H <sub>2</sub> CrO <sub>4</sub>	1 to 50%	S	L
citric, acid	C <sub>3</sub> H <sub>4</sub> (OH)(CO <sub>2</sub> H) <sub>3</sub>	sol. sat.	S	S
cresol		sol. sat.	-	NS
cresylic, acid (methylbenzoic)		sol. sat. 100%	NS	NS
crylonitrile	CH <sub>2</sub> CHCN	Tec. Pure	NS	NS
crotonaldehyde		100%	NS	NS
copper chlorid	Cu Cl <sub>2</sub>	sol. sat.	S	S
copper fluorid	Cu Fr	2%	S	S
copper sulphate	Cu SO <sub>4</sub>	sol. sat.	S	S
dextrin	CH <sub>2</sub> Cl CH <sub>2</sub>	sol. sat.	S	L
dichloroethane	CH <sub>2</sub> Cl CH <sub>2</sub>	100%	NS	NS
diglycolic, acid	(CH <sub>2</sub> ) <sub>2</sub> O (CO <sub>2</sub> H) <sub>2</sub>	18%	S	L
dimethylamine	(CH <sub>3</sub> ) <sub>2</sub> NH	30%	S	L
etange Cl, Chlorure ethanediol (see glycol ethylene)		sol. sat.	S	S
ethanol (see ethilic alcohol)	C <sub>2</sub> H <sub>5</sub> O			
ethil, acetate	CH <sub>3</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	100%	NS	NS
ethil, acrylate	CH <sub>3</sub> CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub>	100%	NS	NS
ethilic, alcohol	CH <sub>3</sub> CH <sub>2</sub> OH	95 %	S	L
ethilic, ether	CH <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	100%	NS	L
ferric chloride	FeCl <sub>3</sub>	10%	L	NS
ferric chloride	FeCl <sub>3</sub>	sat.	S	L
ferric nitrate	Fe(NO <sub>3</sub> ) <sub>3</sub>	n.d.	S	S
ferric sulphate	Fe(SO <sub>4</sub> ) <sub>3</sub>	n.d.	S	S
ferrous chloride	FeCl <sub>2</sub>	sat.	S	S
ferrous sulphate	FeSO <sub>4</sub>	n.d.	S	S
fertilizer		up to 10%	S	S
fertilizer		sat.	S	S
fluorhydric, acid	HF	40%	L	NS
		60%	L	NS
fluorhydric, acid (gas)		100%	L	NS
fluosilicic, acid		32%	S	S
formaldehyde	HCOH	sol. dil. 40%	S	L
formic, acid	HCOOH	1 to 50%	S	L
fuel oil		100%	S	S
fuel oil		comm.	S	S
furfuryl, alcohol	C <sub>5</sub> H <sub>3</sub> OCH <sub>2</sub> OH	100%	NS	NS
glycerol	HOCH <sub>2</sub> CHOCH <sub>2</sub> OH	100%	S	S
glycol ethylene	HOCH <sub>2</sub> CH <sub>2</sub> OH	sol. con.	S	S
glycolic, acid		30%	S	S
glucose	C <sub>6</sub> H <sub>12</sub>	sol. sat.	S	L
hydrogen	H <sub>2</sub>	100%	-	-
hydrogen, peroxide	H <sub>2</sub> O <sub>2</sub>		S	S
hydrogen, sulphide (gas)	H <sub>2</sub> S	100%	S	S
iron chloride	FeCl <sub>3</sub>	sol. sat.	S	S
lactide, acid	CH <sub>3</sub> CHOH COOH	10%	S	L
lactid, acid		10 to 90%	L	NS
lead acetate	Pb(CH <sub>3</sub> COO) <sub>2</sub>	sol. dil.	S	S
levain		sol..	S	L
lubricating oils		comm.	S	S
magnesium carbonate	MgCO <sub>3</sub>	all	S	S
magnesium, chloride	Mg Cl <sub>2</sub>	sol. sat.	S	S
magnesium hydroxide	Mg(OH) <sub>2</sub>	all	S	S
magnesium nitrate	MgNO <sub>3</sub>	n.d.	S	S
magnesium, sulphate	Mg SO <sub>4</sub>	sol. sat.	S	S
maleique, acid	COOH CHCH COOH	sol. sat.	S	L
methanol	CH <sub>3</sub> OH			
(see methilic, alcool methile methacrylate)				
methyl acetate	CH <sub>3</sub> COOCH <sub>3</sub>	100%	-	-
methyl alcohol	CH <sub>3</sub> OH	n.d.	S	S
methyl bromide	CH <sub>3</sub> Br	100%	NS	NS
methyl chloride	CH <sub>3</sub> Cl	100%	NS	NS
methyl ethylketone	CH <sub>3</sub> COCH <sub>2</sub> CH <sub>3</sub>	all	NS	NS
methylene, chlorure	CH <sub>3</sub> Cl	100%	NS	NS
methilic alcohol	CH <sub>3</sub> OH	100%	S	L
milk			S	S
molasses		sol. sat.	NS	NS
nickel chloride	NiCl <sub>3</sub>	all	S	S
nickel nitrate	Ni(NO <sub>3</sub> ) <sub>2</sub>	n.d.	S	S
nickel, sulphate	NiSO <sub>4</sub>	sol. sat.	S	S
nicotic, acid		sol. con.	S	S
nitric, acid	HNO <sub>3</sub>	up to 45%	S	L
		50 to 98%	NS	NS

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AGENT REACTIVES	FORMULA CHIMICA CHEMICAL FORMULA	CONCENTRAZIONE CONCENTRATION	TEMPERATURA PVC U-PVC TEMPERATURE	
			20°C	60°C
oils and fats			S	S
oleic, acid	$C_8H_{17}CHCH(CH_2)_7CO_2H$	100%	S	S
oleum		10% of SO <sub>3</sub>	NS	NS
oxalic, acid	$HO_2CCO_2H$	sol. dil.	S	L
oxalic, acid	$H_2C_2O_2$	sol. sat.	S	S
oxigen	$O_2$	100%	S	S
ozone	$O_3$	100%	NS	NS
perchloric, acid	$MCIO_4$	10%	S	L
		70%	S	-
phenol	$C_6H_5OH$	90%	NS	NS
phenylhydrazine	$C_6H_5NHHN_2$	100%	NS	NS
		97%	NS	NS
phosphine		100%	S	S
phosphorus III chloride		100%	NS	-
phosphoric, acid	$H_3PO_4$	up to 25%	S	L
		25 to 85%	S	S
picric, acid	$HOC_6H_2(NO_2)_3$	sol. sat.	S	S
plomb tetrathyl		100%	S	-
potassium bichromate	$K_2Cr_2O_7$	40%	S	S
potassium bromide	$KBrO_3$	sol. sat.	S	S
potassium caustic (see potassium hydroxide)		.	S	S
potassium carbonate	$K_2CO_3$	sat.	S	S
potassium cyanidre	$KCN$	sol.	S	S
potassium chloride	$KCl$	sol. sat.	S	S
potassium chromate	$K_2CrO_4$	40%	S	S
potassium hexacyanoferrate	$K_4Fe(CN)_6$	sol. sat.	S	S
potassium hydroxide	$KOH$	sol.	S	S
potassium nitrate	$KNO_3$	sol. sat.	S	S
potassium permanganate		20%	S	S
potassium persulphate	$K_2S_2O_8$	sol. sat.	S	L
propane liquefied gas	$C_3H_8$	100%	S	-
pyridine		up to 100%	NS	-
sea water		100%	S	S
soap		sol.	S	L
sodium benzoate		35 %	S	L
sodium bicarbonate	$NaHCO_3$	n.d.	S	S
sodium bisulfite	$NaHSO_3$	sol. sat.	S	S
sodium chlorate	$NaClO_3$	sol. sat.	S	S
sodium chlorure	$NaCl$	sol. sat.	S	S
sodium hexacyanoferrate	$Na_4Fe(Cn)_6$	sol. sat.	S	S
sodium hydroxide	$NaOH$	sol.	S	S
sodium hypochlorite (13% chlorine)	$NaClO$	100%	S	L
sodium nitrate	$NaNO_3$	n.d.	S	S
sodium perborate	$NaBO_3H_2O$	all	S	S
sodium sulphite	$Na_2SO_3$	sol. sat.	S	L
sugar		sol. sat.	S	S
sulphuric acid	$H_2SO_4$	40 to 90%	S	L
sulphuric acid		96%	L	NS
sulphure dioxide (liquid)	$SO_2$	100%	L	NS
sulphure dioxide (dry)		100%	S	S
sulphuric, acid	$H_2SO_3$	sol.	S	S
tannic, acid	$C_{14}H_{10}O_9$	sol.	S	S
tartaric, acid	$HOOC(C HOH)_2 COOH$	sol.	S	S
toluene	$C_6H_5CH_3$	100%	NS	NS
trichloroethylene	$Cl_2CCHCl$	100%	NS	NS
trimethylolpropane	$CH_3CH_2CH(CH_2N(CH_3)_2)$	up to 10%	S	L
urea	$CO(NH_2)_2$	10%	S	L
urine		-	S	L
vinyl, acetate	$H_3CO_2CHCH_2$	100%	NS	NS
wine		-	S	S
xylol		100%	NS	NS
zinc chloride	$ZnCl$	sol. sat.	S	S
zinc nitrate	$Zn(NO_3)_2$	n.d.	S	S
zinc sulphate	$ZnSO_4$	dil.	S	S
zinc sulphate	$ZnSO_4$	sat.	S	S

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