

TELBEX Rigid PVC Sheet

Chemical Resistance Data

Telbex Plate Surfaced Rigid PVC Sheet has excellent resistance to a wide range of both organic and inorganic chemicals. The list below is provided as an aid for the user to help them establish the potential suitability of Telbex rigid PVC sheet for their application. Telegan would recommend that users should carry out relevant field trials using this information as a guideline, since the conditions of exposure for each application can vary wildly.

Organic Compounds

Telbex is unaffected by aliphatic hydrocarbons (most oils and greases), as well as aliphatic alcohols. It is attacked by aromatic and chlorinated hydrocarbons, ketones, ethers, esters and amines. Usually these organic compounds will cause swelling of the PVC by solvent action.

Inorganic Compounds

At temperatures of up to 60°C, Telbex is resistant to attack by most inorganic liquids including moderately concentrated acids, all alkalis and aqueous salt solutions at all concentrations. Powerful oxidising agents including oxidising acids will attack it in certain conditions.

Key to chemical resistance table

A - Satisfactory

Telbex may be used up to the temperatures and concentrations quoted.

B – Some attack or Absorption

Telbex may be considered where limited life is acceptable. When Telbex is to be used with these chemicals and conditions, users must carry out full-scale trials under working conditions as similar as is possible to those likely to be experienced in application.

C - Unsatisfactory

Absorption, swelling, decomposition, embrittlement and loss of strength may be experienced.

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Chemical	Concentration (%)	Temperature (°C)	Rating
Acetaldehyde,	100	20	A
<i>Aqueous</i>	40	40	B
Acetic acid,	100	20	C
<i>aqueous,</i>	upto 25	40	A
	upto 25	60	B
	25-60	40	B
	80	40	B
Acetic anhydride,	100	20	C
	100	40	C
Acetic ester,	100	20	C
Acetone, <i>aqueous traces</i>	-	20	C
	100	20	C
Ammonia, <i>liquid</i>	100	20	B
<i>gaseous</i>	100	60	A
Beer	-	60	A
Benzene	100	20	C
Bisulphite lye, containing SO ₂	-	50	A
Brandy	-	20	A
Bromine, <i>liquid</i>	100	20	C
Bromine vapours	Low	20	B
Butadiene	100	60	A
Butanol,	100	20	A
	100	40	A
	100	60	B
Butyl acetate	100	20	C
Butyric acid, <i>concentrated</i>	-	20	C
<i>aqueous</i>	20	20	A
Carbon bisulphide	100	20	B
Carbon tetrachloride,	100	20	B
	100	60	C
Caustic potash solution, <i>aqueous</i>	<40	40	A
	<40	60	B
	50-60	60	A

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Chemical	Concentration (%)	Temperature (°C)	Rating
Caustic soda, <i>aqueous</i>	<40	40	A
	<40	60	B
Ceric alcohol	100	60	A
	50-60	60	A
Chlorine, <i>gaseous, dry</i>	-	40	B
Chlorosulphic acid	100	20	B
Citric acid, <i>aqueous</i>	<10	40	A
	<10	60	B
	-	60	A
<i>saturated</i>	-	60	A
Coal gas, <i>benzene free</i>	-	20	A
Cyclohexanol	100	20	C
Cyclohexanone	100	20	C
Dimethylamine, <i>liquid</i>	100	-30	B
Ethyl alcohol, <i>aqueous, all concentrations</i>	-	40	A
	96	60	B
	-	20	A
<i>denatured (toluene)</i>	-	20	A
Ethyl ether	100	20	C
Ethyl oxide	100	-20	C
Fatty acids	100	60	A
Formaldehyde, <i>aqueous,</i>	diluted	40	A
	diluted	60	B
	40	60	A
Freon 12	100	20	A
Fruit Juices	-	60	A
Glycerol, <i>aqueous</i>	-	60	A
Glycol, <i>aqueous</i>	-	60	A
Hydrochloric acid, <i>aqueous</i>	<30	40	A
	<30	60	B
	>30	60	A
Hydrofluoric acid, <i>aqueous</i>	<40	20	A
	40	60	B
	60	20	B
	70	20	B
Hydrogen	100	60	A

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Chemical	Concentration (%)	Temperature (°C)	Rating
Hydrogen bromide, <i>aqueous</i>	<10	40	A
	<10	60	B
<i>gaseous, moist</i>	48	60	A
	0.5	20	A
	1	20	B
	5	20	B
	97	40	B
<i>liquified</i>	-	20	C
Hydrogen chloride, <i>moist</i>	-	40	A
<i>dry</i>	-	60	A
Hydrogen peroxide, <i>aqueous</i>	<30	20	A
	<20	50	A
Hydrogen sulphide, <i>dry</i>	100	60	A
<i>aqueous, warm saturated</i>	-	40	A
	-	60	B
	-	60	B
Javel Water	-	60	B
Javel Water, 12.5% chlorine	-	40	A
Linseed oil	100	40	A
Mercury	-	60	A
Methyl alcohol	100	40	A
	100	60	B
Methyamine, <i>aqueous</i>	32	20	B
Methyl chloride	100	20	C
Milk	-	20	A
Mineral oil	-	60	A
Nitrous gases, <i>concentrated</i>	-	20	B
Nitric acid, <i>aqueous</i>	<50	50	A
	98	20	C
Nitrosulphuric acid			
<i>sulphuric/nitric acid/water</i>	48/49/3	20	A
	48/49/3	40	B
	50/50/0	20	B
	50/50/0	40	C
	10/20/70	50	A
	10/87/3	20	B
	50/31/19	30	A

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Chemical	Concentration (%)	Temperature (°C)	Rating
Oils and fats	-	60	C
Oxides of nitrogen, <i>damp and dry</i>	diluted	60	B
Oxides of nitrogen, <i>damp, concentrated</i>	-	20	C
Oxygen	-	60	A
Petrol	100	60	A
Petrol benzene	80/20	20	C
Phenol, <i>aqueous</i>	<90	45	B
	1	20	A
Phenolhydrazine,	100	20	C
Phosgene, <i>liquid</i>	100	20	C
<i>gaseous</i>	100	20	A
	100	60	B
Phosphoric acid, <i>aqueous</i>	<30	40	A
	<30	60	B
	>30	60	A
Photographic developer, <i>working solution</i>	-	40	A
Photographic fixing bath, <i>working solution</i>	-	40	A
Phosphorous trichloride	100	20	C
Potash, <i>aqueous</i>	saturated	40	A
Propane, <i>liquid</i>	100	20	A
<i>gaseous</i>	100	20	A
Pyridine	-	20	C
Roaster gases, <i>dry</i>	-	60	A
Seawater	-	40	A
		60	A
Soap solution, <i>aqueous,</i>	concentrated	20	A
	concentrated	60	A
Soda solution,	diluted	40	A
	diluted	60	B
	saturated	60	A
Sodium bisulphite, <i>aqueous,</i>	diluted	40	A
	diluted	60	B
	saturated	60	A
	concentrated	60	C

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Chemical	Concentration (%)	Temperature (°C)	Rating	
Sodium chloride, <i>aqueous</i>	diluted	40	A	
	diluted	60	B	
	saturated	60	A	
Sodium sulphide, <i>aqueous</i>	diluted	40	A	
	diluted	60	B	
	saturated	60	A	
Sulphuric acid, <i>aqueous</i>	96	20	A	
	96	60	B	
	<40	40	A	
	<40	60	B	
	40 to 80	60	A	
	80 to 90	40	A	
	<i>fuming</i>	10	20	C
Sulphur dioxide, <i>aqueous, below 8 atmospheres moist and aqueous,</i>	saturated	20	A	
	<100	40	A	
	50	50	A	
	<100	60	B	
	<i>dry</i>	-	60	A
	<i>liquid,</i>	100	-10	B
		100	20	B
	100	60	C	
Tartaric acid, <i>aqueous</i>	<10	40	A	
	<10	60	B	
	saturated	60	A	
Toluene	100	20	C	
Trichloroethylene,	100	20	C	
Triethenolamine	100	20	C	
Vinegar	-	40	A	
	-	60	B	
<i>wine vinegar</i>	-	50	A	
Vinyl acetate,	100	20	C	
Urine	-	40	A	
	-	60	B	

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Chemical	Concentration (%)	Temperature (°C)	Rating
Waste gases, containing			
<i>nitrous constituents</i>	trace	60	A
<i>hydrogen fluoride</i>	trace	60	A
<i>fuming sulphuric acid</i>	trace	20	A
<i>hydrochloric acid</i>	all concentrations	60	A
<i>sulphuric acid, moist</i>	all concentrations	60	A
<i>sulphur trioxide</i>	all concentrations	20	A
<i>sulphur dioxide</i>	low	60	A
Water, general	100	60	A
<i>potable</i>	100	60	A
Water effluent, containing			
<i>phenol and butanol</i>	trace	20	A
<i>strong acids</i>	trace	40	A
Wine, red and white	-	20	A
Xylene,	100	20	C

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