

General Characteristics

- ◇ The basic technique of cold solvent cement welding, gives considerable economies in labour and materials.
- ◇ UPVC is light in weight, clean in use, and has neither taste nor odour.
- ◇ It does not support combustion.
- ◇ It has excellent thermal insulation properties which inhibit condensation.
- ◇ The smooth bore of the pipes and fittings offers less resistance to flow, so there is considerably less tendency to blockage compared with conventional materials.
- ◇ Due to the absence of build-up on the internal wall of the pipe, the flow properties remain unaltered.
- ◇ Unaffected by most corrosive liquids, UPVC pipes can be satisfactorily used for laboratory chemical wastes, trade wastes from chemical and food processing plants.
- ◇ UPVC is a non-conductor of electricity, and is therefore not subject to galvanic or electrolytic action.



CHRISTOFOROU BROS PLASTICS LTD

Plastic Systems you can trust

LARNAKA INDUSTRIAL ESTATE
P.O.B. 45068 LARNAKA - CYPRUS
TEL: 04-6 533342 (3 Lines) 550007
FAX.(04)533007

General/Physical Properties

Properties	Unit	Value
Density	g/cm ²	1,47
Shore Hardness D (ISO 868)	-	80
Tensile Strength at Break	N/mm ²	38
Tensile Strength at Yield Point	N/mm ²	45
Elastic Modulus	N/mm ²	2800
Elongation at Break	%	120
Notched Impact Strength at 23 °C (Izod)	J/m	35
Vicat Softening Point (ISO 306)	° C	79-85
Heat Deflection Temperature (ISO 75) Proc A 185 N/mm ² Proc B 46 N/mm ²	° C ° C	69 74
Flammability UL 94 (1,6mm) A UL 94 (3,2mm) A	- -	VO VO
Volume Resistivity @ 25 ° C	ohm/cm	7,5x10 ¹⁶
Volume Resistivity @ 70 ° C	ohm/cm	9x15 ¹³
Surface Resistivity	ohm	2,75x10 ¹⁵
Water Absorption	%	0,59
MFI	g/10min	16

Unplasticized PVC Chemical Resistance Table

The resistance of unplasticised PVC to a wide range of chemicals is listed in the following table.

The symbols used to denote performance are as follows:

E = EXCELLENT TO SATISFACTORY

SA = SOME ATTACK OR ABSORPTION

The material may be considered for use when alternative materials are unsatisfactory and where limited life is acceptable. When PVC is to be used with such chemicals full-scale trials under realistic conditions are particularly necessary.

U = UNSATISFACTORY

So rated because of decomposition, solution, swelling, loss of ductility etc. of the samples tested.

It may be safely assumed that chemical resistance decreases with both increasing temperature and with increasing concentration of reagent, and that the reverse is also true. No valid assumptions can be made, however, if the temperature and concentration move in compensating directions. The rating SOME ATTACK OR ABSORPTION of the Symbol (SA) should not be assumed to apply at conditions different from those shown.

Chemical	UPVC	
	68°F / 20°C	140°F / 60°C
Acetic Acid (20%)	E	E
Acetone	U	U
Alcohol (40%)	E	SA
Aluminium Fluoride	E	E
Aluminium Sulphate	E	E
Ammonia 0,88 SG a.q. soln	E	E
Ammonium Carbonate	E	E
Ammonium Nitrate	E	E
Ammonium Phosphate - neutral	E	E
Ammonium Sulphate	E	E
Aniline Hydrochloride (40%) Aq.	U	U
Barium Carbonate	E	E
Barium Hydroxide	E	E
Beer	E	E
Benzene or Benzol	U	U
Brine	E	E
Butanol (Primary Butyl Alcohol)	E	U
Calcium Carbonate	E	E
Calcium Chloride	E	E
Calcium Hypochlorite	E	E
Castor Oil	E	E
Chloric Acid (20%)	E	E
Chlorine Gas (wet)	SA	U
Chlorine (liquid)	U	U

UNPLASTICIZED PVC CHEMICAL RESISTANCE TABLE

Chemical	UPVC	
	68°F / 20°C	140°F / 60°C
Chromic Acid 10%	E	E
Chromic Acid 50%	E	SA
Cresylic Acid 50%	E	E
Crude Oil	E	SA
Diesel Oil - Derv	E	E
Detergents (normal dilutions)	E	E
Ethylene Glycol	E	E
Fatty Acids	E	E
Ferric Nitrate	E	E
Ferrous Chloride	E	E
Fish Solubles	E	E
Formaldehyde 40%	E	E
Fruit Juices, Pulp	E	E
Gallic Acid	E	E
Gas-natural	E	E
Hydrochloric Acid	E	E
Hydrogen Peroxide 50%	E	E
Hydrochlorous Acid	E	E
Acetic Acid (80%)	E	SA
Alcohol (100%)	E	SA
Aluminium Chloride	E	E
Aluminium Hydroxide	E	E
Ammonia Gas (dry)	E	E
Ammonium Chloride	E	E
Ammonium Hydroxide	E	E
Ammonium Phosphate (ammoniacal)	E	E
Aniline	U	U
Barium Chloride	E	E
Barium Sulphate	E	E
Beet Sugar Liquors	E	E
Bleach (12,5% Active Chlorine)	E	E
Calcium Chlorate	E	E
Calcium Hydroxide	E	E
Carbon Dioxide (wet or dry)	E	E
Chloroacetic Acid	E	SA
Chlorine Gas (dry)	E	SA
Chlorine Water	E	E
Chrome Alum. Sat. Soln	E	E
Chromic Acid 30%	E	E

Chemical	UPVC	
	68°F / 20°C	140°F / 60°C
Cottonseed Oil	E	E
Cresylic Acid 100%	SA	U
Diesel Oil - Gas	E	E
Disodium Phosphate	E	E
Ferric Chloride	E	E
Ferric Sulphate	E	E
Ferrous Sulphate	E	E
Fluorine Gas (wet)	E	E
Formic Acid 50%	E	SA
Gas - manufactured	SA	U
Hydrofluoric Acid 50%	E	U
Hydrogen Sulphide (wet aqueous solution)	E	E
Linseed Oil	E	E
Magnesium Carbonate	E	E
Magnesium Hydroxide	E	E
Mercury	E	E
Milk	E	E
Mixed Acids (dilute)	SA	U
Nickel Chloride	E	E
Nickel Sulphate	E	E
Nitric Acid 68%	SA	SA
Oils and Fats Animal	E	E
Mineral	E	E
Vegetable	E	E
Petrol (depending upon type)	U	U
Phosphoric Acid (50% and 85%)	E	E
Potassium Bromate	E	E
Potassium Dichromate	E	E
Petroleum Products (crude)	E	E
Silver Cyanide	E	E
Sodium Bicarbonate	E	E
Sodium Chloride	E	E
Sodium Hydroxide	E	E
Spirits (Whisky, etc.)	E	E
Sulphur Dioxide (wet)	E	SA
Sulphuric Acid 75% - 90%	E	SA
Sulphurous Acid	E	E
Tri-sodium Phosphate	E	E
Urine	E	E
Vinegar	E	E

UNPLASTICIZED PVC CHEMICAL RESISTANCE TABLE

Chemical	UPVC	
	68°F / 20°C	140°F / 60°C
Water (acid mine water)	E	E
Water (Salt)	E	E
White Liquor	E	E
Xylene or Xylol	U	U
Zinc Chloride	E	E
Zinc Sulphate	E	E
Magnesium Chloride	E	E
Mercuric Chloride	E	E
Methyl Chloride	U	U
Mineral Oils	E	SA
Molasses	E	E
Nickel Nitrate	E	E
Nitric Acid 10%	E	SA
Nitric Acid 90%	U	U
Oleum	U	U
Oxygen	E	E
Phosgene - Gas	E	SA
Photographic Solutions	E	E
Plating Solutions	E	E
Potassium Chloride	E	E
Potassium Hydroxide	E	E
Silver Nitrate	E	E
Sodium Carbonate	E	E
Sodium Dichromate	E	E
Sodium Nitrate	E	E
Sulphur Dioxide (dry)	E	E
Sulphuric Acid 10% - 75%	E	E
Sulphuric Acid 95%	SA	U
Sulphur Trioxide - Gas	E	E
Water (Fresh)	E	E
Wetting Agents (Dil.)	E	E
Wines and Spirits	E	E
Trichloroethylene	U	U
Zinc Nitrate	E	E

Information in the above table supplied to users is based on our Raw Material suppliers experience and is given in good faith, but, because of the many particular factors which are outside our knowledge and control and affect the use of products, no warranty is given or is to be implied with respect to such information.