CHEMICAL RESISTANCE DATA

ASTORE

THERMOPLASTIC PIPEWORK SYSTEMS

Founded in 1970, Astore has and continues to develop advanced techniques in the production of thermoplastic pressure fittings and valves in both PVC and ABS.

ABS Pipework Systems

ABS Typical Applications:

- Waste water
- Potable water
- Process water
- Chilled water
- Agriculture and horticulture

Imperial size range:
- 1/2" to 8"

Pressure rating:
- Up to Class E

PVC-U Pipework Systems

PVC-U Typical Applications:

- Water treatment
- Waste water
- Agriculture and horticulture
- Swimming pools
- Irrigation
- Chemical applications

Imperial size range:
- 1/2" to 12"

Metric size range:
- 16mm to 315mm

Temperature:
- 5°C to 60°C

Pressure rating:
- Up to Class E

VALVES

Complete range of manual and actuated ball and butterfly valves

- Ball valves
- Butterfly valves
- Check valves
- Non-return valves

Available in ABS and PVC-U

Available with Electric or Pneumatic actuation

CLAMP SADDLES

- Made from tough polypropylene material
- Mechanical saddles with single and double branch
- Stainless steel reinforcing ring

Metric size range:
- 20mm to 315mm

Pressure rating:
- Up to 10 bar

COMPRESSION FITTINGS

- Wide range of fittings available
- Polypropylene material
- Fittings for PE metric pipelines

Metric size range:
- 16mm to 110mm

Pressure rating:
- PN16 up to 63mm
  PN10 75mm to 110mm

Contents

Astore has the perfect products for your business. Astore thermoplastic pipework systems have been manufactured and used for the pressure pipework requirements of different market sectors for many years.

Our range of fully matched systems of pipes, fittings and valves are ideally suited for a variety of applications where a lightweight, high quality and durable pipework system is required.

Water treatment

Water and waste water treatment are critical to every industry. Each industry has its own set of requirements that determine treatment needs, from process water to waste water. Astore understands water technologies and is ready to help you meet these requirements. Through everything from cooling lines to high-purity water technology and related services, Astore helps industry and manufacturers meet specific water quality requirements to ensure consistent processes and production. Astore also helps industry meet ever-increasing industrial waste water regulations, while improving efficiency and reducing costs.

Aquaculture

Aquaculture is the farming of aquatic plants and animals, and encompasses everything from plants to fish, molluscs, crustaceans, amphibians and reptiles. Aquaculture is the world's fastest growing food production sector, increasing by 10% per annum over the past decade. As world fisheries continue to decline, it is worth noting that already 40% of the fish consumed worldwide are produced in farms.

Astore has always had a very close relationship with the practical side of the aquaculture industry, working with production, technology and supply companies. We provide pressure pipework solutions and are able to advise on projects at all levels and at all stages of development.

Food and beverage

Astore has worked with a variety of businesses across the food and beverage supply chain to help develop innovative pipework solutions to the industry.

The food and beverage sector is facing rapidly evolving competitive pressures and businesses need to adapt to combat these pressures, but also to maintain a competitive advantage.

Astore offer food and beverage companies information, product range selection and innovative solutions to enhance their strategies, needs and future applications.

Irrigation

Water is one of our most precious natural resources. Yet in many of the fastest growing regions of the world, it is also the scarcest. In some areas 70% of the natural water can be used for irrigation purposes. By using Astore pressure pipework you can reduce leakage and increase control to help address the seasonal scarcity of water.

Astore products offer simple installation with long-term performance benefits resulting in improved productivity.

The range offers flexibility, enabling you to lay-down new pipelines with compression fittings; or adding to or branching off from existing pipelines with clamp saddles. Both solutions offer leak-free performance.

Pools and spas

Astore has over 30 years experience in the UK pool and spa industry and are knowledgeable in all aspects of the pipe requirements for the pool/spa market. We manufacture PVC pressure pipework and valves, which are sold through a national network of swimming pool and spa companies with whom we work closely.

Astore products are specifically designed to meet the needs of the pools and spa sector. Providing excellent resistance to chlorine attack and offering a broad range to suit large or small projects, the Astore products ensure a trouble free installation and a long life.

A Guide to Product Selection

Material	Chemical resistance and performance data	Typical applications	Unsuitable for following uses	Size and jointing information
ABS Acrylonitrile Butadiene Styrene	Moderately strong mineral acids Caustic and ammoniacal solutions Most inorganic salt solutions Some detergents Temperature range -40ºC to +70ºC	Chilled water, low temperature brine, potable water, air conditioning, process water, foodstuffs	Pressure applications over 70ºC, strong bleaches aromatic solvents	Pipe and fittings for solvent cement jointing manufactured in metric sizes from 16mm to 315mm to DIN & ISO standards and in inch sizes from 3/8" to 12" British Standard. Threaded fittings also available.
PVC-U Unplasticised Polyvinyl Chloride	Strong mineral acids Caustic and ammoniacal solutions Some organics Most detergents Temperature range +5ºC to 60ºC	Potable water, general purpose water, waste water etc.	Aromatic solvents temperatures below +5ºC temperatures over 60ºC	Pipe and fittings for solvent welding manufactured in metric sizes 12mm to 315mm to DIN and ISO standards and 3/8" to 12" British Standards. Threaded fittings also available.
PVC-C	Very strong mineral acids Caustic solutions Most inorganic salt solutions Some detergents Temperature range +5ºC to +100ºC	High temperature, aggressive substances, highly corrosive conditions, chemical processing & many industrial applications	Aromatic solvents Temperatures below +5ºC	Pipe and fittings for solvent cement jointing manufactured in sizes from 16mm to 160mm.
Polypropylene (PP)	Strong mineral acids Caustic and ammoniacal solutions Inorganic salt solutions Many organics Detergents Temperature range 0ºC to +100ºC	Chemical applications, irrigation, potable water	Strong oxidising acids and halogens	Clamp saddles - up to 10 bar metric size range 20mm - 315mm. Compression fittings - PN16 up to 63mm PN10 75mm - 110mm metric size range 16mm - 110mm.

* Note, temperatures given are for guidance only; please check before specifying.

Thermoplastic Pipe: guidance for correct usage

Please be aware that chemical properties can be affected by factors such as:

- temperature
- fluid concentration
- aeration
- flow velocity
- turbulence
- chemical stability of conveyed fluid
- duration of exposure
- pressure

Fire

The use of thermoplastic materials to convey flammable substances may be unacceptable due to fire hazard.

Foodstuffs

A resistant classification does not imply absolute suitability e.g. certain foodstuffs may require gaskets to meet organoleptic requirements.

Thermal Insulation and Trace Heating

Although thermplastic pipe systems have low thermal conductivity, circumstances do sometimes arise where thermal insulation or trace heating tapes may be required.

Fibre 'wool' types of insulation such as 'Rockwool' are suitable for many applications but some materials used in the manufacture of certain trace heating tapes, thermal insulation and their adhesives can have a detrimental effect upon certain thermoplastics.

It is essential that our Technical Support Department are consulted prior to use of these products.

Approval of any product is conditional on it being used strictly in accordance with the manufacturers instructions for applications in conjunction with thermoplastic materials.

Thread Sealants

Some adhesive thread sealants can chemically attack some plastics and must not be used.

Ultra-violet Light

Avoid prolonged exposure to ultra-violet light, particularly in storage out of doors, and especially in tropical climates.

Label Adhesive

It is possible that label adhesives will contain stress cracking agents. We recommend that other methods are used to mark pipe or that adequate checks are made to ensure suitability.

Health and Safety at Work Act and COSHH Regulations

Attention is drawn to the requirements in the UK of this Act and to the 1988 Control of Substances Hazardous to Health (COSHH) regulations.

Astore UK cannot accept responsibility for accidents arising from the misuse of its products due to incorrect installation or application.

Valves

All ball valves have either PE (suitable for water applications) or PTFE (enhanced chemical resistance) seats.**
For full details please consult the Astore technical catalogue.

** together with FPM or EPDM seals.

Standards and Quality

Astore products are manufactured in an environment operating a quality assurance system in accordance with BS EN 9001 and have been successfully assessed by BSI in this respect. This quality assurance system imposes stringent standards of control throughout design, development and subsequent production and inspection processes. In addition to the provision of certificates of conformity for all raw materials, products are subjected to a range of checks and tests. Detailed records are kept for dimensional and performance tests for each production batch. Each batch is given a unique identification number which is reproduced on every fitting, giving complete traceability.

All of this is your guarantee of quality and performance in the most testing conditions.
Astore pipes and fittings are manufactured within an environmental management system which operates in accordance with the requirements of ISO 14001.

Astore thermoplastic ranges diverse in many ways also share many common advantageous characteristics:

- sealed systems for complete joint integrity
- corrosion resistance
- resistance to scaling and deposit accumulation
- improved flow characteristics.
- malleability
- lightweight
- easy installation - simplified work practice

These notes are to be read in conjunction with the Chemical Resistance tables

1. See under Allyl, Amyl, Butyl, Ethyl, Furfuryl, Methyl, or iso-Propyl.
2. These are compounds whose general formula is either $(R1)_2SO_4(R2)_2(SO_4)_6.24\ H_2O$ or $(R1)(R2)(SO_4)_2.\ 12\ H_2O$, where R1 represents an atom of Potassium, Sodium, Ammonium, Rubidium, Caesium, Silver, or Thallium; and (R2) represents an atom of Aluminium, Iron, Chromium, Manganese or Thallium.
3. This substance is insoluble in pure water. If conveyed aqueous it would always be in the form of a suspension.
4. This substance decomposes in hot water. Unless suitability is indicated refer to Astore UK.
5. Substances which are generally categorised can have widely variable compositions, and therefore each needs to be tested for suitability. Refer to Astore UK.
6. This substance is only sparingly soluble in water. If conveyed aqueous it would usually be in the form of a suspension.
7. Solutions other than sea water and aqueous Sodium chloride should be referred to Astore for suitability tests.
8. This substance is sparingly soluble in water, which then reacts with it.
9. A solution of Chromium trioxide in water, often produced by the action of concentrated Sulphuric acid on Sodium dichromate.
10. This substance is explosive and would not normally be considered suitable for conveyance in plastic pipework.
11. Oils can contain variable amounts of aromatic hydrocarbons and additives. Refer to Astore UK for a specific recommendation.
12. Most plasticizers are not suitable for conveyance in plastics.
13. Not for conveyance in the presence of Bromide.
14. Not for conveyance in the presence of Bromate.
15. Not for conveyance in the presence of Iodide.
16. Not for conveyance in the presence of Iodate.
17. The substance decomposes in cold water. Unless suitability is indicated, refer to Astore UK.
18. Some of this group of chemicals could be very aggressive towards plastics and rubbers, but others would be quite harmless.
19. Joints made with Astore PVC-U solvent cement are generally as resistant as the PVC-U material itself.

    However, the following media are exceptional:

    Hydrochloric acid at concentrations of 25% and above.

    Nitric acid at concentrations of 20% and above.

    Sulphuric acid at concentrations of 70% and above.

    Sodium hypochlorite active chlorine higher than 7.5%.

    Hydrofluoric acid each concentration.

    Lyes, bases (caustic soda) concentration higher than 35%.

    On systems required to convey the above acids, and where PVC-U is shown as resistant (+), we recommend the use of HCR-36 chemically resistant cement, see Astore technical catalogue for full details.
20. See under either Ferrous or Ferric.
21. Astore ABS has been safely used for many years with cold potable and grade 1 distilled water. It conforms to the requirements of 45/3 of the BFP/BIBRA Code of practice for Safety in use for Plastics in Food Contact Applications (1973 edition).

Classification

+	Resistant
*	Likely to be resistant
o	Unlikely to be resistant
-	Not resistant
	No data available

In some instances a * has been used where extensive usage by Astore customers indicates suitability, but where confirmation by in-house testing is not possible.

Where data is not currently available, but where samples can be supplied by potential customers, then Astore will conduct chemical suitability tests and make recommendations accordingly.

Abbreviations

Code	Material
ABS	Acrylonitrile Butadiene Styrene
PVC-U	Unplasticised Polyvinyl Chloride
PP	Polypropylene
C-PVC	Chlorinated Polyvinyl Chloride
EPDM	Ethylene Propylene Diene Monomer Rubber
FPM	Fluorine Rubber (Viton®)
PTFE	Polytetrafluoroethylene (e.g. Teflon®)

Dictionary of chemicals

	Chemical Name	Formula and/or other description
A	Acetaldehyde	$CH_3.CHO$
	Acetamide	$CH_3.CO.NH_2$
	Acetic acid	$CH_3.COOH$
	Acetic anhydride	$(CH_3CO)_2O$
	Acetone	$(CH_3)_2CO$
	Acetophenone	$C_6H_5CO.CH_3$
	Acetyl chloride	$CH_3.COCl$
	Acrylonitrile	$CH_2:CH.CN$
	Adipic acid	$(CH_2.CH_2.COOH)_2$
	Allyl alcohol	$CH_2CH:CH_2OH$
	Allyl chloride	$CH_2.CH:CH_2Cl$
	Aluminium chloride	$AlCl_3.AlCl_3.6H_2O$
	Aluminium fluoride	AlF_3, $AlF_3.H_2O$ $AlF_3.3½H_2O$
	Aluminium hydroxide	$Al(OH)_3$
	Aluminium nitrate	$Al(NO_3)_3.9H_2O$
	Aluminium oxalate	$Al(C_2O_4)_3.4H_2O$
	Aluminium sulphate	$Al_2(SO_4)_3$, $Al_2(SO_4)_3.18\ H_2O$
	Ammonia	NH_3
	Ammonium carbonate	$NH_4HCO_3NH_2COONH_4$, $H_2NCOONH_4$
	Ammonium chloride	NH_4Cl
	Ammonium fluoride	NH_4F
	Ammonium hydroxide	NH_4OH, NH_3 dissolved in H_2O
	Ammonium molybdate	$(NH_4)_6MoO_{24}.4H_2O$
	Ammonium nitrate	NH_4NO_3
	Ammonium persulphate	$(NH_4)_2S_2O_8$
	Ammonium phosphate(s)	$NH_4H_2PO_4$, $(NH_4)_2HPO_4$, $(NH_4)_3PO_4.3H_2O$
	Ammonium sulphate	$(NH_4)_2SO_4$
	Ammonium thiocyanate	NH_4SCN
	n-Amyl acetate	$CH_3.COO.(CH_2)_4.CH_3$, Pentyl acetate
	n-Amyl alcohol	$CH_3.(CH_2)_3.CH_2OH$, Pentan-1-ol, Butyl carbinol
	n-Amyl chloride	$CH_3.(CH_2)_3.CH_2Cl$, Pentyl chloride
	Aniline	$C_6H_5.NH_2$
	Antimony trichloride	$SbCl_3$, Antimony (III) chloride, Butter of Antimony
	Aqua regia	Conc.HCl:conc.HNO_3, 3:1 by volume
B	Barium bromide	$BaBr_2$, $BaBr_2.2H_2O$
	Barium carbonate	$BaCO_3$
	Barium chloride	$BaCl_2$, $BaCl_2.2H_2O$
	Barium hydroxide	$Ba(OH)_2.8H_2O$
	Barium sulphate	$BaSO_4$, Barytes, Blanc fixe
	Battery acid	conc. H_2SO_4 diluted with water to about 25%
	Benzaldehyde	$C_6H_5.CHO$
	Benzene	C_6H_6
	Benzoyl chloride	$C_6H_5.COCl$
	Benzyl chloride	$C_6H_5.CH_2Cl$
	Borax	$Na_2B_4O_7$, $Na_2B_4O_7.10H_2O$, *di*-Sodium tetraborate
	Boric acid	H_3BO_3, Orthoboric acid
	Brine	Sea water or aqueous Sodium chloride
	Bromine	Br_2
	Bromine water	Br_2 dissolved in H_2O
	Butane	$CH_3.(CH_2)_2.CH_3$
	2-Butoxyethanol	$C_4H_9O.CH_2.CH_2OH$, Butyl cellosolve
	Buttermilk	The aqueous liquid removed during the manufacture of butter
	n-Butyl acetate	$CH_3.COO.(CH_2)_3.CH_3$
	n-Butyl alcohol	$CH_3.(CH_2)_3.OH$, Butan-1-ol
	n-Butyric acid	$CH_3.CH_2.CH_2.COOH$
C	Cab-O-Sil	Fumed Silicon dioxide
	Calcium bromide	$CaBr_2$, $CaBr_2.2H_2O$
	Calcium carbonate	$CaCO_3$
	Calcium chloride	$CaCl_2$, $CaCl_2.2H_2O$, $CaCl_2.6H_2O$
	Calcium hydroxide	$Ca(OH)_2$, Slaked lime
	Calcium nitrate	$Ca(NO_3)_2$, $Ca(NO_3)_2.4H_2O$
	Calcium oxide	CaO, Lime
	Calcium sulphate	$CaSO_4$, $CaSO_4.2H_2O$ (Gypsum), $CaSO_4.½H_2O$ (Plaster of Paris)
	Carbon dioxide	CO_2
	Carbon disulphide	CS_2
	Carbon monoxide	CO
	Carbon tetrachloride	CCl_4
	Caustic potash	KOH, Potassium hydroxide
	Caustic soda	NaOH, Sodium hydroxide
	Cellosolve	$C_2H_5.O.CH_2.CH_2.OH$, 2-Ethoxyethanol, Glycol monoethyl ether
	Cellosolve acetate	$CH_3.COO.CH_2.CH_2.O.C_2.H_5$, 2-Ethoxyethyl acetate
	Chloral hydrate	$CCl_3.CH(OH)_2$
	Chlorine	Cl_2
	Chlorine dioxide	ClO_2
	Chlorobenzene	C_6H_5Cl
	Chloroform	$CHCl_3$
	Chromic acid	$CrO_3 + H_2O$
	Citric acid	$C(OH)(COOH)CH_2COOH)_2.H_2O$
	Cooking salt	NaCl, Common salt, Sodium chloride
	Copper chloride(s)	CuCl, $CuCl_2$, $CuCl_2.2H_2O$
	Copper nitrate	$Cu(NO_3)_2.3H_2O$, Cupric nitrate
	Copper sulphate	$CuSO_4$, $CuSO_4.5H_2O$, Cupric sulphate
	Creosote	A coal-tar fraction
	Cresol(s)	Isomers of $CH_3.C_6H_4.OH$, Cresylic acid
	Cyclohexane	$CH_2.(CH_2)_4.CH_2$
	Cyclohexanol	$CH_2.(CH_2)_4.CH.OH$
	Cyclohexanone	$CH_2.(CH_2)_4.CO$
D	Dekalin	$C_{10}H_{18}$, Decahydronapthalene
	Dextrins	Variable hydrolysis products of starch
	Dextrose	$O(CH.OH)_4.CH.CH_2OH$, D-Glucose
	Di-iso-butyl ketone	$[(CH_3)_2CH.CH_2]_2CO$
	Di-n-butyl phthalate	$C_6H_4(COOC_4H_9)_2$
	Di-octyl phthalate	$C_6H_4[COO.CH_2.CH(C_2H_5)(CH_2)_3.CH_3]_2$, Di-(2-ethylhexyl) phthalate, DOP
	Dichlorobenzene(s)	$C_6H_4Cl_2$
	1,2-Dichloroethane	$Cl.CH_2.CH_2.Cl$
	1,1-Dichloroethylene	Cl.CH:CH.Cl
	Dichloromethane	CH_2Cl_2, Methylene chloride
	1,2-Dichloropropane	$CH_3.CHCl.CH_2Cl$
	Diethanolamine	$[CH_2(OH).CH_2]_2NH$
	Diethyl ether	$(C_2H_5)_2O$, Ether, Ethyl ether
	Diethyl phthalate	$C_6H_4(COO.C_2H_5)_2$
	Dimethylformamide	$H.CO.N(CH_3)_2$, DMF, N N-Dimethylformamide
	1,4-Dioxan	$CH_2.CH_2.O.CH_2.CH_2.O$
	Drinking water	H_2O
E	EDTA	$[CH_2.N(CH_2.COOH_2)]_2$, Ethylenediaminetetra-acetic acid
	2-Ethoxyethanol	$C_2H_5.O.CH_2.OH$, Cellosolve, Glycol monoethyl ether
	2-Ethoxyethyl acetate	$CH_3.COO.CH_2.OC_2H_5$, Cellosolve acetate
	Ethyl acetate	$CH_3.COO.C_2H_5$
	Ethyl acrylate	$CH_2:CH.COO.C_2H_5$
	Ethyl alcohol	C_2H_5OH, Ethanol
	Ethyl chloride	C_2H_5Cl, Chloroethane
	Ethyl ether	$(C_2H_5)_2O$, Diethyl ether, Ether
	Ethylene glycol	$CH_2(OH).CH_2OH$, Ethanediol
	Ethylene Oxide	$CH_2.CH_2O$
F	Ferric chloride	$FeCl_3$, $FeCl_3.6H_2O$, Iron (III) chloride
	Ferric nitrate	$Fe(NO_3)_3.9H_2O$, Iron (III) nitrate
	Ferric Sulphate	$Fe_2(SO_4)_3$, $Fe_2(SO_4)_3.xH_2O$, Iron (III) sulphate
	Ferrous chloride	$FeCl_2.4H_2O$, Iron (II) chloride

	Chemical Name	Formula and/or other description
	Ferrous sulphate	$FeSO_4.7H_2O$, Iron (II) sulphate
	Fluorine	F_2
	Fluorosilicic acid	H_2SiF_6, Hydrofluorosilicic acid
	Formalin	Aqueous solution of 37-40% Formaldehyde and 10-14% Methanol
	Formic acid	H.COOH
	Fructose	$O.CH_2.(CH.OH)_3.C(OH).CH_2OH$, Laevulose
	Furfural	OHC:CH.CH:CCHO, Furfuraldehyde
	Furfuryl alcohol	$O.CH:CH.CH:C.CH_2OH$
G	Gasoline	Petrol
	Gelatin(e)	Glue obtained from bones, hides etc.
	Glucose, D or L	$O.(CHOH)_4.CH.CH_2OH$
	Glycerin(e)	$CH_2OH.CHOH.CH_2OH$, Glycerol, 1,2,3-Propanetriol
	Gypsum	$CaSO4_4.2H_2O$, A Calcium sulphate
H	*n*-Heptane	$CH_3(CH_2)_5CH_3$
	n-Hexane	$CH_3(CH_2)_4CH_3$
	Hydrazine	$H_2N.NH_2$
	Hydrazine hydrate	$NH_2.NH_2.H_2O$
	Hydrochloric acid	HCl
	Hydrofluoric acid	HF
	Hydrogen	H_2
	Hydrogen peroxide	H_2O_2
	Hydrogen sulphide	H_2S
	Hypochlorous acid	HOCl aqueous
I	IMS	Industrial Methylated spirit, Rectified spirit containing less than 10% Methanol
	Iodine, tincture of	Contains 1_2 and KI in Rectified spirit
K	Kerosene	Paraffin C_{12}-C_{16} distilled from Petroleum, Coal or Shale
L	Lactic acid	$CH_3.CHOH.COOH$
	Lanolin	Woolfat
	Lead acetate	$(CH_3.COO)_2Pb.3H_2O$
	Lime	CaO, Calcium oxide
M	Magnesium carbonate	$MgCO_3$, $MgCO_3.3H_2O$, $MgCO_3.5H_2O$, Magnesite
	Magnesium chloride	$MgCl_2$, $MgCl_2.6H_2O$
	Magnesium hydroxide	$Mg(OH)_2$
	Magnesium nitrate	$Mg(NO_3)_2.2H_2O$, $Mg(NO_3)_2.6H_2O$
	Magnesium sulphate	$MgSO_4$, $MgSO_4.H_2O$, $MgSO_4.7H_2O$, Epsom salts
	Mercuric chloride	$HgCl_2$, Mercury (II) chloride
	Mercurous nitrate	$Hg_2(NO_3)_2.2H_2O$, Mercury (I) nitrate
	Mercury	Hg, Quicksilver
	Mesityl oxide	$(CH_3)_2C:CH.CO.CH3$
	Metallic soaps	Fatty acid salts of Copper, Aluminium, Lithium, Calcium etc.
	Methane	CH_4
	Methyl acetate	$CH_3.COO.CH_3$
	Methyl alcohol	CH_3OH, Methanol
	Methyl carbitol	$CH_3.O.CH_2CH_2.O.CH_2CH_2OH$, Methyldigol
	Methyl cellosolve	$CH_3O.CH_2CH_2OH$, 2-Methoxyethanol
	Methyl ethyl ketone	$C_2H_5.CO.CH_3$, MEK, Butanone
	Methyl *iso*-butyl ketone	$(CH_3)_2CH.CH_2.CO.CH_3$, MIBK
	Methyl methacrylate	$CH_2:C(CH_3).COO.CH_3$
	Methylated spirits	Methylated spirits (Industrial)
	Mineral oil	A hydrocarbon fraction distilled from Petroleum
	MSG	$NH_2CH(COOH.CH_2.COONa.H_2O$, L-Glutamic acid, Sodium salt
N	Nickel chloride	$NiCl_2$, $NiCl_2.6H_2O$
	Nickel nitrate	$Ni(NO_3)_2.6H_2O$, Nickel (II) nitrate
	Nickel sulphate	$NiSO_4$, $NiSO_4.6H_2O$
	Nitric acid	HNO_3
	Nitrobenzene	$C_6H_5NO_2$
	Nitrotoluene	$CH_3.C_6H_4NO_2$
O	Oleic acid	$CH_3(CH_2)_7CH:CH(CH_2)_7COOH$, 9-Octadecanoic acid
	Oleum	Fuming Sulphuric acid, contains 25-30% SO_3
	Oxalic acid	$(COOH)_2.2H_2O$
	Oxygen	O_2
	Ozone	O_3
P	Palmitic acid	$CH_3.(CH_2)_{14}.COOH$, Hexadecanoic acid
	Paraffin fuel	Saturated aliphatic hydrocarbons
	Paraffin liquid	Saturated aliphatic hydrocarbons
	n-Pentane	$CH_3.(CH_2)_3.CH_3$
	Peracetic acid	$CH_3.CO.OOH$, Peroxyacetic acid
	Peroxyacetic acid	$CH_3.CO.OOH$, Peracetic acid
	Petrol	Gasoline
	Petroleum	Hydrocarbons and other natural substances
	Petroleum ether	Blends of aliphatic hydrocarbons
	Petroleum jelly	Petrolatum, C_{18}-C_{22} hydrocarbons obtained from petroleum
	Phosphoric acid	H_3PO_4, *ortho*-phosphoric acid
	Plaster of Paris	$CaSO_4.\frac{1}{2}H_2O$, a Calcium sulphate
	Potable water	H_2O, drinking water
	Potash	K_2CO_3, $K_2CO_3.1\frac{1}{2}H_2O$, Potassium carbonate
	Potassium bicarbonate	$KHCO_3$, Potassium hydrogen carbonate
	Potassium bisulphate	$KHSO_4$, Potassium hydrogen carbonate
	Potassium bisulphite	$K_2S_2O_5$
	Potassium bromate	$KBrO_3$
	Potassium bromide	KBr
	Potassium carbonate	K_2CO_3, $K_2CO_3.1\frac{1}{2}H_2O$, Potash
	Potassium chlorate	$KClO_3$
	Potassium chloride	KCl
	Potassium cyanide	KCN
	Potassium dichromate	$K_2Cr_2O_7$
	Potassium ferricyanide	$K_3Fe(CN)_6$, Potassium hexacyanoferrate (III)
	Potassium ferrocyanide	$K_4Fe(CN)_6.3H_2O$, Potassium hexacyanoferrate (II)
	Potassium fluride	KF
	Potassium hydroxide	KOH, Caustic potash
	Potassium iodate	KIO_3
	Potassium iodide	KI
	Potassium metaborate	KBO_2
	Potassium nitrate	KNO_3, Saltpetre
	Potassium permanganate	$KMnO_4$
	Potassium persulphate	$K_2S_2O_8$
	Potassium sulphate	K_2SO_4
	Potassium sulphite	$K_2SO_5.2H_2O$
	Potassium thiosulphate	$K_2S_2O_3.xH_2O$
	Propionic acid	$CH_3.CH_2.COOH$
	Iso-Propyl alcohol	$(CH_3)_2.CHOH$, IPA, Propan-2-ol
	Propylene glycol	$CH_2(CH_2OH)_2$, Propane-1, 2-diol, $CH_3.CH(OH).CH_2OH$, Propane-1,3-diol
	Pyridine	C_5H_5N
R	Rectified spirit	Ethyl alcohol containing about 4% Water
	Refrigerant 22	$CHClF_2$
S	Saltpetre	KNO_3, Potassium nitrate
	Slaked lime	$Ca(OH)_2$, Calcium hydroxide
	Sodium acetate	$CH_3.COONa$, $CH_3.COONa.3H_2O$
	Sodium aluminate	$NaAlO_2$
	Sodium benzoate	$C_6H_5.COONa$
	Sodium bicarbonate	$NaHCO_3$, Bicarbonate of soda, Sodium hydrogen carbonate
	Sodium bisulphate	$NaHSO_4.H_2O$, Sodium hydrogen sulphate
	Sodium bisulphite	$Na_2S_2O_5$, Sodium metabisulphite
	Sodium bromate	$NaBrO_3$

Chemical Name	Formula and/or other description
Sodium bromide	$NaBr$
Sodium carbonate	Na_2CO_3, $Na_2CO_3.10H_2O$, Soda
Sodium chlorate	$NaClO_3$
Sodium chloride	$NaCl$, Common salt, Cooking salt
Sodium cyanide	$NaCN$
Sodium dichromate	$Na_2Cr_2O_7.2H_2O$
Sodium ferrocyanide	$Na_4Fe(CN)_6.10H_2O$, Sodium hexacyanoferrate (II)
Sodium fluoride	NaF
Sodium hydroxide	$NaOH$, Caustic soda
Sodium hypochlorite	$NaOCl$
Sodium iodide	NaI
Sodium metabisulphite	$Na_2S_2O_5$, Sodium bisulphite
Sodium metaborate	$NaBO_2$, $NaBO_2.4H_2O$
Sodium nitrate	$NaNO_3$
Sodium nitrite	$NaNO_2$
Sodium phosphate(s)	Na_2HPO_4, $Na_3PO_4.12H_2O$, NaH_2PO_4, $Na_4P_2O_7.10H_2O$
Sodium silicate	A waterglass, $NaO.xSiO_2$, where $x = 3$ to 5
Sodium sulphate	Na_2SO_4,$Na_2SO_4.10H_2O$, Glauber's salt
Sodium sulphite	Na_2SO_3, $Na_2SO_3.7H_2O$
di-Sodium tetraborate	$Na_2B_4O_7.10H_2O$, Borax
Sodium thiosulphate	$Na_2S_2O_3$, $Na_2S_2O_3.5H_2O$
Soft soap	Potassium salts of fatty acids
Stannic chloride	$SnCl_4$, $SnCl_4.5H_2O$, Tin (IV) chloride
Stannous chloride	$SnCl_2$, $SnCl_2.2H_2O$, Tin (II) chloride
Starch	All types of $(C_6H_{10}O_5)x$
Stearic acid	$CH_3.(CH_2)_{16}.COOH$
Stoddard solvent	White spirit
Sulphamic acid	$NH_2.SO_3H$
Sulphur	All types S
Sulphur dioxide	SO_2
Sulphuric acid (Oleum)	H_2SO_4
T Tannin	Tannic acid, derivatives of Polyhydroxybenzoic acid
Tartaric acid	$(COOH.COOH)_2$
1,1,2,2-Tetrachloroethane	$CHCl_2.CHCl_2$
Tetrahydrofuran	$CH_2(CH_2)_2.CH_2O$
Tetralin	$C_6H_4.CH_2.CH_2CH_2CH_2$
Thionyl chloride	$SOCl_2$, Thionyl dichloride
Toluene	$C_6H_5.CH_3$
Trichlorobenzene(s)	All isomers of $C_6H_3Cl_3$
Trichloroethylene	$CHCl:CCl_2$
Tricresyl phosphate	$(CH_3.C_6H_4)_3PO_4$
U Urea	$NH_2.CO.NH_2$
Uric acid	$C_5H_4N_4O_3$
V Vaseline	A petroleum jelly
Vinegar	Containing up to 10% Acetic acid, mineral salts and traces of esters
Vinyl acetate	$CH_3COO.CH:CH_2$
W Water	H_2O, distilled, deionized, demineralised, potable
Water-glass	Potassium or Sodium silicate
White spirit	Stoddard solvent
X Xylene	$C_6H_4(CH_3)_2$
Z Zinc bromide	$ZnBr_2$
Zinc carbonate	Basic $ZnCo_3.2ZnO.3H_2O$
Zinc chloride	$ZnCl_2$
Zinc nitrate	$Zn(NO_3)_2.6H_2O$
Zinc Oxide	ZnO
Zinc phosphate(s)	$Zn_3(PO_4)_2$, $Zn_3(PO_4)_2.4H_2O$, $Zn_3(PO_4)_2.8H_2O$
Zinc sulphate	$ZnSO_4.7H_2O$

Chemical resistance data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
A Acetaldehyde	Usual technical	20	-	-	0	-	+	-
		40	-	-	0	-		-
		60	-	-	0	-		-
		80	-	-	0	-		-
		100	-	-	0	-		-
		120	-	-	0	-		-
Acetamide 5%	Aqueous	20	+	+				
		40	+	+				
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Acetic acid 10%	Aqueous	20	+	+	+	+	+	-
		40		+	+	+		-
		60		+		+	-	-
		80		-		+	-	-
		100	-	-		-	-	-
		120	-	-		-	-	-
Acetic acid 50%	Aqueous	20	-	+	+	-	*	-
		40	-	+	+	-		-
		60	-			-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Acetic acid 80%	Aqueous	20	-	+	+	-		-
		40	-		+	-		-
		60	-			-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Acetic acid glacial	Usual technical	20	-	-	+	-		-
		40	-	-	+	-		-
		60	-	-		-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Acetic anhydride	Usual technical	20	-	-	*	-	*	-
		40	-	-		-		-
		60	-	-		-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Acetone	Usual technical	20	-	-	+	-	+	-
		40	-	-	+	-		-
		60	-	-	+	-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Acetophenone	Usual technical	20	-	-	+	-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Acetyl chloride	Usual technical	20	-					
		40	-					
		60	-					
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Acrylonitrile	Usual technical	20	-	-	*	-		
		40	-	-	*	-		
		60	-	-	*	-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Adipic acid	Saturated aqueous	20		+	*	+		
		40			*	+		
		60			*	+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Alcohol (see note 1)	Usual technical	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Allyl alcohol	Usual technical	20	-		*	-		
		40	-		*	-		
		60	-		*	-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Allyl chloride	Usual technical	20	-	-	0	-		
		40	-	-	0	-		
		60	-	-	0	-		
		80	-	-	0	-		
		100	-	-	0	-		
		120	-	-	0	-		
Alum(s) (See note 2)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Aluminium chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-	+	+	*	*
		100	-	-		-		
		120	-	-		-		
Aluminium fluoride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-		+	*	*
		100	-	-		-		
		120	-	-		-		
Aluminium hydroxide (see note 3)	Suspended aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Aluminium nitrate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-		+	*	*
		100	-	-		-		
		120	-	-		-		
Aluminium oxalate (see note 3)	Suspended aqueous	20	+	+	+		*	*
		40	+	+	+		*	*
		60	+	+	+		*	*
		80	-	-			*	*
		100	-	-		-		
		120	-	-		-		
Aluminium sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-		+	*	*
		100	-	-		-		
		120	-	-		-		
Ammonia 35% Sp. gr. = 0.88	Aqueous	20	+	+	+	-	+	
		40	+	+	+	-		
		60	+	+	+	-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable ☐ No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Ammonia dry gas	Usual commercial	20	-	+	+	-	*	-
		40	-	+	+	-		-
		60	-	+	+	-		-
		80	-	-		-		-
		100	-	-		-		
		120	-	-		-		
Ammonia liquid	Usual commercial	20	-	-		-	*	-
		40	-	-		-		-
		60	-	-		-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Ammonium carbonate (see note 4)	Saturated aqueous	20	+	+	+	+	*	*
		40				+		
		60				+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Ammonium chloride (see note 4)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Ammonium fluoride (see note 4)	Saturated aqueous	20	+	+	+	+	+	+
		40				+		
		60				+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Ammonium hydroxide Sp. gr. = 0.88	Aqueous	20	+	+	*	-	+	
		40	+	+	*	-		
		60	+	+	*	-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Ammonium molybdate	Saturated Aqueous	20	+	+	*	*		
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Ammonium nitrate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-		+	*	*
		100	-	-		-		
		120	-	-		-		
Ammonium persulphate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+		*	*
		60	+	+	+		*	*
		80	-	-			*	*
		100	-	-		-		
		120	-	-		-		
Ammonium phosphate(s)	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+		*	*
		60	+	+	+		*	*
		80	-	-			*	*
		100	-	-		-		
		120	-	-		-		
Ammonium sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-		+	*	*
		100	-	-		-		
		120	-	-		-		
Ammonium thiocyanate	Saturated aqueous	20	+	+	0	+		
		40	+	+	0	+		
		60	+	+	0	+		
		80	-	-	0	+		
		100	-	-	0	-		
		120	-	-	0	-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
n-Amyl acetate	Usual technical	20	-	-	0	-	+	-
		40	-	-	0	-		-
		60	-	-	0	-		-
		80	-	-	0	-		-
		100	-	-	0	-		-
		120	-	-	0	-		-
n-Amyl alcohol	Usual technical	20	-	+	+	-	+	+
		40	-		+	-		+
		60	-		+	-		+
		80	-	-		-		+
		100	-	-		-		
		120	-	-		-		
n-Amyl alcohol	Usual technical	20	-	-	-	-		
		40	-	-	-	-		
		60	-	-	-	-		
		80	-	-	-	-		
		100	-	-	-	-		
		120	-	-		-		
Aniline	Usual technical	20	-	-	+	-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Animal glue, oils (see note 5)	Usual commercial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Antifreeze (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Antimony trichloride	Saturated aqueous	20		+	+	+		
		40		+	+	+		
		60		+	+	+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Aqua regia	Usual technical	20	-		-	+	-	*
		40	-		-		-	
		60	-		-		-	
		80	-	-	-	-	-	
		100	-	-		-	-	
		120	-	-		-	-	
Aromatic hydrocarbons	Various blends	20	-	-	-	-	-	*
		40	-	-	-	-	-	*
		60	-	-	-	-	-	*
		80	-	-	-	-	-	*
		100	-	-	-	-	-	*
B		120	-	-	-	-	-	
Barium bromide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Barium carbonate (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Barium chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Barium hydroxide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Barium sulphate (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Battery acid Sp.gr.=1.18	Aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	-	+
		100	-	-		-	-	
		120	-	-		-	-	
Beer	Usual commercial	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Benzaldehyde	Usual technical	20	-	-	*	-	-	-
		40	-	-		-	-	-
		60	-	-		-	-	-
		80	-	-		-	-	-
		100	-	-		-	-	-
		120	-	-		-	-	-
Benzene	Usual technical	20	-	-	-	-	-	-
		40	-	-	-	-	-	-
		60	-	-	-	-	-	-
		80	-	-	-	-	-	-
		100	-	-	-	-	-	-
		120	-	-	-	-	-	-
Benzoyl chloride	Usual technical	20	-	-	0	0	-	-
		40	-	-	0	0	-	-
		60	-	-	0	0	-	-
		80	-	-	0	0	-	-
		100	-	-		-	-	-
		120	-	-		-	-	-
Benzyl chloride	Usual technical	20	-	0	0	-	0	0
		40	-	0	0	-	0	0
		60	-	0	0	-	0	0
		80	-	-	0	-	0	0
		100	-	-		-		
		120	-	-		-		
Borax	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-	+	+	*	*
		100	-	-		-		
		120	-	-		-		
Boric acid	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	*
		60	+	+	+	+	+	*
		80	-	-	+	+	*	
		100	-	-		-		
		120	-	-		-		
Brake fluids (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Brine (see note 7)	Usual proprietary	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Bromine	Anhydrous liquid	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Bromine water	Saturated aqueous	20	-		-			
		40	-		-			
		60	-		-			
		80	-	-	-			
		100	-	-	-	-		
		120	-	-	-	-		
Bromine, trace levels	Aqueous, for sterilization	20	+	+	+	+	+	
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Butane	Gaseous	20	+	+			-	+
		40	+	+			-	+
		60	+	+			-	*
		80	-	-			-	*
		100	-	-		-	-	
		120	-	-		-	-	
2-Butoxyethanol	Usual technical	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Buttermilk	Usual commercial	20	+	+	+	*	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
n-Butyl acetate	Usual technical	20	-	-	0	-	0	-
		40	-	-	0	-	0	-
		60	-	-	-	-	0	-
		80	-	-	-	-	0	-
		100	-	-		-	0	-
		120	-	-		-	0	-
n-Butyl alcohol	Usual technical	20	-	+	+	-	+	
		40	-		*	-	*	
		60	-		*	-	*	
		80	-	-		-	*	
		100	-	-		-		
		120	-	-		-		
n-Butyric acid	Usual technical	20	-	-		-	0	*
		40	-	-		-	0	
		60	-	-		-	0	
		80	-	-		-	0	
		100	-	-		-	0	
		120	-	-		-	0	
Cab O-Sil (see note 3)	Suspended aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Calcium bromide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

C

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable ☐ No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Calcium carbonate (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Calcium chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Calcium hydroxide (see note 6)	Usual industrial	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Calcium nitrate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-	+	+	*	*
		100	-	-		-		
		120	-	-		-		
Calcium oxide (see note 8)	Powder	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Calcium sulphate (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Carbon dioxide	Gaseous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Carbon disulphide	Liquid	20	-	-	-	-		
		40	-	-	-	-		
		60	-	-	-	-		
		80	-	-	-	-		
		100	-	-	-	-		
		120	-	-	-	-		
Carbon monoxide	Gaseous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Carbon tetrachloride	Usual commercial	20	-	-	-	-	-	-	+
		40	-	-	-	-	-	-	+
		60	-	-	-	-	-	-	+
		80	-	-	-	-	-	-	*
		100	-	-	-	-	-	-	
		120	-	-	-	-	-	-	
Castor oil	Usual commercial	20	-	+	*	+	-	0	+
		40	-	+	*	+	-	0	+
		60	-	+	*	+	-	0	+
		80	-	-	-		-	0	+
		100	-	-	-		-		
		120	-	-	-		-		
Caustic Potash 20%	Aqueous	20	+	+	+	+	+	*	
		40	+	+	+	+	+		
		60	+	+	+	+	+		
		80	-	-	+	+	+		
		100	-	-		-			
		120	-	-		-			

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Caustic Potash	Saturated aqueous	20	+	+	+	+	+	-
		40	+	+	+	+	+	-
		60	+	+	+	+	+	-
		80	-	-	+	+	+	-
		100	-	-		-		-
		120	-	-		-		-
Caustic soda 20%	Aqueous	20	+	+	+	+	+	*
		40	+	+	+	+	+	
		60	+	+	+	+	+	
		80	-	-	+	+	+	
		100	-	-		-		
		120	-	-		-		
Caustic soda	Saturated aqueous	20	+	+	+	+	+	-
		40	+	+	+	+	+	-
		60	+	+	+	+	+	-
		80	-	-	+	+	+	-
		100	-	-		-		-
		120	-	-		-		-
Cellosolve	Usual commercial	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Cellosolve acetate	Usual commercial	20	-	-		-	0	-
		40	-	-		-	0	-
		60	-	-		-	0	-
		80	-	-		-	0	-
		100	-	-		-	0	-
		120	-	-		-	0	-
Chloral hydrate	Usual technical	20			0			
		40			0			
		60			0			
		80		-	0			
		100	-	-	0	-		
		120	-	-	0	-		
Chlorine gas (dry) trace levels	Usual industrial	20	-	+	-	-	-	+
		40	-		-	-	-	+
		60	-	-	-	-	-	+
		80	-	-	-	-	-	+
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Chlorine gas (wet)	Usual industrial	20	-	-	-	-	-	-
		40	-	-	-	-	-	-
		60	-	-	-	-	-	-
		80	-	-	-	-	-	-
		100	-	-	-	-	-	-
		120	-	-	-	-	-	-
Chlorine liquid	Usual industrial	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Chlorine dioxide, trace levels	Aqueous, for Sterilization	20	+	+	+	+	+	
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Chlorobenzene	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Chloroform	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Chromic acid (see note 9)	Saturated aqueous	20	-	*	-	+	-	+
		40	-		-	+	-	
		60	-	-	-	+	-	
		80	-	-	-	+	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Cider	Usual commercial	20	+	+	+	0	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Citric acid 10%	aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	+	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Coca-Cola	Usual proprietary	20	+	+	+		+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Cooking salt	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Copper chloride(s)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	*	+	*	*
		60	+	+	*	+	*	*
		80	-	-	*	+	*	*
		100	-	-		-		
		120	-	-		-		
Copper nitrate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-		+	*	*
		100	-	-		-		
		120	-	-		-		
Copper sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	*
		60	+	+	+	+	+	*
		80	-	-	+	+	+	*
		100	-	-		-		
		120	-	-		-		
Corn oil	Usual commercial	20	-	+	+	-	-	+
		40	-	+	+	-	-	+
		60	-	+	+	-	-	+
		80	-	-		-	-	+
		100	-	-		-	-	
		120	-	-		-	-	
Cottonseed oil	Usual commercial	20	-	+	+	-	-	+
		40	-	+	+	-	-	+
		60	-	+	+	-	-	+
		80	-	-		-	-	+
		100	-	-		-	-	
		120	-	-		-	-	
Creosote	Usual commercial	20	-	0	0	-	-	+
		40	-	0	0	-	-	*
		60	-	0	0	-	-	*
		80	-	-	0	-	-	*
		100	-	-	0	-	-	
		120	-	-	0	-	-	

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Cresol(s)	Usual commercial	20	-	-	+	-	0	
		40	-	-	*	-	0	
		60	-	-	*	-	0	
		80	-	-	*	-	0	
		100	-	-		-	0	
		120	-	-		-	0	
Cutting fluids (see note 5)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Cyclohexane	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Cyclohexanol	Usual technical	20	-	0	*	-		*
		40	-			-		
		60	-			-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Cyclohexanone	Usual technical	20	-	-		-	0	
		40	-			-	0	
		60	-	-	-	-	0	
		80	-	-	-	-	0	
		100	-	-	-	-	0	
D		120	-	-	-	-	0	
Dekalin	Usual technical	20	-	-	0	-		
		40	-	-	0	-		
		60	-	-	0	-		
		80	-	-	0	-		
		100	-	-	0	-		
		120	-	-	0	-		
Detergents (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Developers, photographic (see note 5)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Dextrins	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-	+	+	*	*
		100	-	-		-		
		120	-	-		-		
Dextrose	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Di-*iso*-butyl ketone	Usual technical	20	-	-		-	*	-
		40	-	-		-		-
		60	-	-	0	-		-
		80	-	-	0	-		-
		100	-	-	0	-		-
		120	-	-	0	-		-
Di-*n*-butyl phthalate	Usual technical	20	-	-	0	-	-	
		40	-	-	0	-	-	
		60	-	-	0	-	-	
		80	-	-	0	-	-	
		100	-	-	0	-	-	
		120	-	-	0	-	-	

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Dichlorobenzene(s)	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	+
		60	-	-	-	-	-	+
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
1,2-Dichloroethane	Usual technical	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
1,1-Dichloroethylene	Usual technical	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Dichloromethane	Usual technical	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
1,2-Dichloropropane	Usual technical	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Diesel	Usual commercial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Diethanolamine	Usual technical	20	+	*	+			
		40	+	*	+			
		60	*	*	+			
		80	-	-	+			
		100	-	-		-		
		120	-	-		-		
Diethyl ether	Usual technical	20	-	-	0	-	-	-
		40	-	-	0	-	-	-
		60	-	-	0	-	-	-
		80	-	-	0	-	-	-
		100	-	-	0	-	-	-
		120	-	-	0	-	-	-
Diethyl phthalate	Usual technical	20	-	-	0	-	-	
		40	-	-	0	-	-	
		60	-	-	0	-	-	
		80	-	-	0	-	-	
		100	-	-	0	-	-	
		120	-	-	0	-	-	
Dimethylformamide	Usual technical	20	-	-		-		
		40	-	-		-		
		60	-	-	0	-		
		80	-	-	0	-		
		100	-	-	0	-		
		120	-	-	0	-		
Di-octyl phthalate	Usual commercial	20	-	-	0	-	-	
		40	-	-	0	-	-	
		60	-	-	0	-	-	
		80	-	-	0	-	-	
		100	-	-	0	-	-	
		120	-	-	0	-	-	
1,4-Dioxan	Usual technical	20	-	-		-	0	-
		40	-	-		-	0	-
		60	-	-		-	0	-
		80	-	-		-	0	-
		100	-	-		-	0	-
		120	-	-		-	0	-

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Drinking water	Usual domestic	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
E								
EDTA	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		+		
		120	-	-		+		
Emulsifiers (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Emulsions photographic (see note 5)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
2-Ethoxyethanol	Usual commercial	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
2-Ethoxyethyl acetate	Usual commercial	20	-	-		-	0	-
		40	-	-		-	0	-
		60	-	-		-	0	-
		80	-	-		-	0	-
		100	-	-		-	0	-
		120	-	-		-	0	-
Ethyl acetate	Usual technical	20	-	-		-	+	0
		40	-	-		-		0
		60	-	-		-		0
		80	-	-		-		0
		100	-	-		-		0
		120	-	-		-		0
Ethyl acrylate	Usual technical	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Ethyl alcohol	Usual technical	20	-	+	+	-	+	+
		40	-			-		
		60	-			-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Ethyl chloride	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Ethyl ether	Usual technical	20	-	-	0	-	-	-
		40	-	-	0	-	-	-
		60	-	-	0	-	-	-
		80	-	-	0	-	-	-
		100	-	-	0	-	-	-
		120	-	-	0	-	-	-
Ethylene glycol	Usual commercial	20	+	+	+	-	+	+
		40	+	+	+	-	*	+
		60	+	+	+	-	*	+
		80	-	-		-	*	+
		100	-	-		-		
		120	-	-		-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Ethylene oxide	Usual commercial	20	-	-	-	-	0	0
		40	-	-	-	-	0	0
		60	-	-	-	-	0	-
		80	-	-	-	-	0	-
		100	-	-	-	-	0	-
		120	-	-	-	-	0	-
Expandite PJ700	Proprietary mastic	20	+	+				
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
F								
Fatty acids (see note 18)	Usual technical	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Ferric chloride	Saturated aqueous	20	-	+	+	+	+	+
		40	-	+	+	+	+	*
		60	-	+	+	+	+	*
		80	-	-		+	+	*
		100	-	-		-		
		120	-	-		-		
Ferric nitrate	Saturated aqueous	20	+	+	+	+	-	*
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Ferric sulphate (see note 4)	Saturated aqueous	20	+	+	+	+	+	*
		40					+	
		60					+	
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Ferrous chloride	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Ferrous sulphate	Saturated aqueous	20	+	+	+	+	+	*
		40	+	+	+	+	+	*
		60	+	+	+	+	+	*
		80	-	-		+	+	*
		100	-	-		-		
		120	-	-		-		
Fixing solutions (see note 5)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Fluorine	Pure gas	20	-	-	-	-		
		40	-	-	-	-		
		60	-	-	-	-		
		80	-	-	-	-		
		100	-	-	-	-		
		120	-	-	-	-		
Fluorosilicic acid 35%	Aqueous	20	+	+	+	+	*	*
		40	+	+	+			
		60	+	+	+			
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Flutec PP3	Usual technical	20	+	+	+		*	*
		40						
		60						
		80		-		-		
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Formalin	Usual technical	20	-		*		*	*
		40	-					
		60	-					
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Formic acid 3%	Aqueous	20	+	+	+	+	+	
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Formic acid 50%	Aqueous	20	-	*	+	-	+	
		40	-	*		-		
		60	-	*		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Formic acid 90%	Usual technical	20	-		*	-	+	
		40	-			-		
		60	-			-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Fructose	Usual technical	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Furfural	Usual technical	20	-	-	-	-	-	0
		40	-	-	-	-	-	0
		60	-	-	-	-	-	0
		80	-	-	-	-	-	-
		100	-	-		-	-	-
		120	-	-		-	-	-
Furfuryl alcohol	Usual technical	20	-	-	*			
		40	-	-				
		60	-	-				
		80	-	-				
		100	-	-		-		
G		120	-	-		-		
Gasoline	Usual commercial	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Gelatin(e)	Usual commercial	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Glucose, D or L	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Glycerin(e)	Usual commercial	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Gypsum (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable ☐ No data

	Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
H	*n*-Heptane	Usual technical	20	-	0	0	-	-	+
			40	-	0	0	-	-	
			60	-	0	0	-	-	
			80	-	-	0	-	-	
			100	-	-	0	-	-	
			120	-	-	0	-	-	
	n-Hexane	Usual technical	20	-	0	0	-	-	+
			40	-	0	0	-	-	
			60	-	0	0	-	-	
			80	-	-	0	-	-	
			100	-	-	0	-	-	
			120	-	-	0	-	-	
	Hydrazine (see note 10)	Usual technical	20						
			40						
			60						
			80		-				
			100	-	-		-		
			120	-	-		-		
	Hydrazine hydrate	Usual technical	20	*	+	*		+	
			40						
			60						
			80		-				
			100	-	-		-		
			120	-	-		-		
	Hydrochloric acid 10%	Aqueous	20	+	+	+	+	+	+
			40	+	+	+			+
			60	+	+	+			+
			80	-	-				
			100	-	-		-		
			120	-	-		-		
	Hydrochloric acid 30% (see note 19)	Aqueous	20	+	+	+	+	*	+
			40	+	+	+			+
			60	*	+	+			+
			80	-	-				
			100	-	-		-		
			120	-	-		-		
	Hydrochloric acid 37% (see note 19)	Aqueous	20	+	+	+	+	*	+
			40		+	+			+
			60		+	+			+
			80		-		-		
			100	-	-		-		
			120	-	-		-		
	Hydrofluoric acid 40% (see note 19)	Aqueous	20		0	+	-	*	+
			40		0	+	-		
			60		0	+	-		
			80		-		-		
			100	-	-		-		
			120	-	-		-		
	Hydrofluoric acid 60% (see note 19)	Aqueous	20		0	+	-	0	+
			40		0	+	-	0	
			60		0	+	-	0	
			80		-		-	0	
			100	-	-		-	0	
			120	-	-		-	0	
	Hydrofluoric acid anhydrous	Anhydrous	20				-	-	+
			40				-	-	
			60				-	-	
			80		-		-	-	0
			100	-	-		-	-	0
			120	-	-		-	-	0
	Hydrogen	Gaseous	20	+	+	+	+	+	+
			40	+	+	+	+	+	+
			60	+	+	+	+	+	+
			80	-	-	+	+	+	+
			100	-	-		-		
			120	-	-		-		
	Hydrogen peroxide 3%	10 vols aqueous	20	+	+	+	+	*	+
			40		+	+			
			60		+	+			
			80	-	-				
			100	-	-		-		
			120	-	-		-		

	Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
	Hydrogen peroxide 30%	100 vols. aqueous	20		+	+	+	*	+
			40		+	*			
			60		+	*			
			80		-				
			100	-	-		-		
			120	-	-		-		
	Hydrogen sulphide	Gaseous	20	*	+	+		+	*
			40		+	+			
			60		+	+			
			80		-				
			100	-	-		-		
			120	-	-		-		
	Hypochlorous acid 14%	14% Av. Chlorine	20	-	+	+	+	*	*
			40	-			*		
			60	-			*		
			80	-	-		*		
			100	-	-		-		
I			120	-	-		-		
	IMS	Usual industrial	20	-	*	*		*	*
			40	-	*	*			
			60	-	*	*			
			80	-	-				
			100	-	-		-		
			120	-	-		-		
	Ink (see note 5)	Usual industrial	20						
			40						
			60						
			80		-				
			100	-	-		-		
			120	-	-		-		
	Iodine, tincture of	Usual commercial	20	-	-			0	
			40	-	-			0	
			60	-	-			0	
			80	-	-			0	
			100	-	-		-	0	
			120	-	-		-	0	
	Iron salts (see note 20)	Usual technical	20						
			40						
			60						
			80		-				
			100	-	-		-		
K			120	-	-		-		
	Kerosene	Usual commercial	20		*			-	+
			40					-	*
			60					-	*
			80		-			-	*
			100	-	-		-	-	
L			120	-	-		-	-	
	Lactic acid 10%	Aqueous	20		+	+	+	+	*
			40			+	+		
			60				+		
			80		-		+		
			100	-	-		-		
			120	-	-		-		
	Lactic acid 75%	Aqueous	20	-		0	+		
			40	-		0			
			60	-	-	0			
			80	-	-	0	-		
			100	-	-	0	-		
			120	-	-	0	-		
	Lanolin	Usual commercial	20	+	+	+			
			40	+	+	+			
			60	+	+	+			
			80	-	-				
			100	-	-		-		
			120	-	-		-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Latex, natural	Unadulterated emulsion	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Latex, synthetic (see note 5)	Emulsion	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Lead acetate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Lemon juice	Usual commercial	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Lemonade	Usual commercial	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Lime (see note 6)	Powder	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Linseed oil	Raw or boiled	20	-	+	+	-	-	+
		40	-	+	+	-	-	+
		60	-	+	+	-	-	+
		80	-	-		-	-	+
		100	-	-		-	-	
M		120	-	-		-	-	
Magnesium carbonate (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Magnesium chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Magnesium hydroxide (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Magnesium nitrate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Magnesium sulphate	Saturated Aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Mercuric chloride	Saturated aqueous	20	*	+	+	+	+	+
		40		+	+	+		
		60		+	+	+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Mercurous nitrate	Saturated aqueous	20	*	+	+	*	*	*
		40	*	+	+	*		
		60	*	+	+	*		
		80	-	-		*		
		100	-	-		-		
		120	-	-		-		
Mercury	Metallic liquid	20	+	+	+	+	+	+
		40				+		
		60				+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Mesityl oxide	Usual technical	20	-	-				
		40	-	-				
		60	-	-				
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Metallic soaps	Suspended aqueous	20	+	+	+	*	+	+
		40	+	+	+	*	*	*
		60	+	+	+	*	*	*
		80	-	-		*	*	*
		100	-	-		-		
		120	-	-		-		
Methane	Landfill gas	20	*				-	+
		40					-	
		60					-	
		80		-			-	
		100	-	-		-	-	
		120	-	-		-	-	
Methyl acetate	Usual technical	20	-	-		-	+	0
		40	-	-		-		0
		60	-	-		-		0
		80	-	-		-		0
		100	-	-		-		
		120	-	-		-		
Methyl alcohol	Usual technical	20	-		+	-	+	
		40	-			-		
		60	-			-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Methyl carbitol	Usual commercial	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Methyl cellosolve	Usual commercial	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Methyl ethyl ketone	Usual technical	20	-	-		-	+	-
		40	-	-		-		-
		60	-	-		-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-
Methyl-*iso*-butyl ketone	Usual technical	20	-	-		-	+	-
		40	-	-		-		-
		60	-	-		-		-
		80	-	-		-		-
		100	-	-		-		-
		120	-	-		-		-

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Methyl methacrylate	Usual technical	20	-	-	0	-		
		40	-	-	0	-		
		60	-	-	0	-		
		80	-	-	0	-		
		100	-	-	0	-		
		120	-	-	0	-		
Methylated spirits (industrial)	Usual commercial	20	-	*	*	-	*	*
		40	-	*	*	-		
		60	-	*	*	-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Milk	From any animal	20	+	+	+	+	+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Mineral oil (see note 11)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Molasses	Usual commercial	20	+	+	+		*	*
		40	+	+	+			
		60	+	+	+			
		80	-	-				
		100	-	-		-		
		120	-	-		-		
MSG	Saturated aqueous	20	+	+	+		+	+
		40	+	+	+		*	*
		60	+	+			*	*
		80	-	-			*	*
		100	-	-		-		
N		120	-	-		-		
Naphtha	Usual commercial	20	-		0		-	+
		40	-		0		-	+
		60	-		0		-	+
		80	-	-	0		-	
		100	-	-	0	-	-	
		120	-	-	0	-	-	
Nickel chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Nickel nitrate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Nickel sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Nitric acid, fuming	Nitric acid, fuming	20	-	-	-		-	-
		40	-	-	-		-	-
		60	-	-	-		-	-
		80	-	-	-	-	-	-
		100	-	-		-	-	-
		120	-	-		-	-	-
Nitric acid, 10%	Usual technical	20	+	+	+	+	-	+
		40			*	+	-	
		60		-	*	+	-	
		80		-		+	-	
		100	-	-		-	-	
		120	-	-		-	-	

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Nitric acid, 40% (see note 19)	Usual technical	20	-	+	-	+	-	+
		40	-		-		-	
		60	-	-	-		-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Nitric acid, 50% (see note 19)	Usual technical	20	-	+	-	+	-	*
		40	-		-		-	-
		60	-	-	-		-	-
		80	-	-	-	-	-	-
		100	-	-	-	-	-	-
		120	-	-	-	-	-	-
Nitric acid, 70% (see note 19)	Usual technical	20	-	+	-	+	-	*
		40	-		-		-	-
		60	-	-	-		-	-
		80	-	-	-	-	-	-
		100	-	-	-	-	-	-
		120	-	-	-	-	-	-
Nitrobenzene	Usual technical	20	-	-	*	-	*	*
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Nitrotoluene	Usual technical	20	-	-		-	*	*
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
O		120	-	-		-		
Oleic acid	Usual technical	20					-	
		40					-	
		60					-	
		80		-			-	
		100	-	-		-		
		120	-	-		-		
Oleum	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-		-	-	
		120	-	-		-	-	
Olive Oil	Usual commercial	20	-	+	+	-	-	+
		40	-	+	+	-	-	+
		60	-	+	+	-	-	+
		80	-	-		-	-	+
		100	-	-		-	-	
		120	-	-		-	-	
Orange juice	Usual commercial	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Oxalic acid	Saturated aqueous	20	+	+		+		
		40	*	+				
		60	*	+				
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Oxygen	Gaseous	20	+	+	+	+		
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Ozone, trace levels	Aqueous, for sterilization	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
P Paint (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Palmitic acid	Usual technical	20			+		0	+
		40					0	
		60					0	
		80		-			0	
		100	-	-		-		
		120	-	-		-		
Paraffin (Liquid)	Usual technical	20	+			+		
		40	+					
		60	+					
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Paraffin fuel	Usual commercial	20					-	+
		40					-	*
		60					-	*
		80		-			-	*
		100	-	-		-	-	
		120	-	-		-	-	
n-Pentane	Usual technical	20	-	0	-	-	-	+
		40	-	0	-	-	-	+
		60	-	0	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Pepsi-cola	Usual proprietary	20	+	+	+		+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Peracetic acid, trace levels	Aqueous, for sterilization	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Perfume (see note 5)	Usual commercial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Peroxyacetic acid trace levels	Aqueous, for sterilization	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Petrol	Usual commercial	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Petroleum	Natural crude	20	-				0	
		40	-				0	
		60	-				0	
		80	-	-			0	
		100	-	-		-	0	
		120	-	-		-	0	
Petroleum ether	Boiling 30-80°C	20	-	-	-	-	-	*
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Petroleum jelly	Usual commercial	20	+	+	*			*
		40			*			
		60			*			
		80		-				
		100	-	-		-		
		120	-	-		-		
Phosphoric acid 85%	Usual technical	20	-	+	+	+	+	+
		40	-	+	+	+	+	+
		60	-	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Plaster of Paris (see note 6)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Plasticizers (see note 12)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Polish (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Potable water	Usual domestic	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potash	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium bicarbonate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium bisulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium bisulphite	Saturated aqueous	20	+	+	+	*	+	+
		40	+	+	+	*	+	+
		60	+	+	+	*	+	+
		80	-	-	+	*	+	+
		100	-	-		-		
		120	-	-		-		
Potassium bromate (see note 13)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium bromide (see note 14)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Potassium carbonate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium chlorate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-	+	+	*	*
		100	-	-		-		
		120	-	-		-		
Potassium chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium cyanide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium dichromate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium ferricyanide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium ferrocyanide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium fluoride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium hydroxide 20%	Aqueous	20	+	+	+	+	+	*
		40	+	+	+	+	+	
		60	+	+	+	+	+	
		80	-	-	+	+	+	
		100	-	-		-		
		120	-	-		-		
Potassium hydroxide	Saturated aqueous	20	+	+	+	+	+	-
		40	+	+	+	+	+	-
		60	+	+	+	+	+	-
		80	-	-	+	+	+	-
		100	-	-		-		
		120	-	-		-		
Potassium iodate (see note 15)	Saturated aqueous	20	+	+	+	*	+	+
		40	+	+	+	*	+	+
		60	+	+	+	*	+	+
		80	-	-	+	*	+	+
		100	-	-		-		
		120	-	-		-		
Potassium iodide (see note 16)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Potassium metaborate	Saturated aqueous	20	+	+	+		+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Potassium nitrate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium permanganate	Saturated aqueous	20		+	+	+	+	
		40					+	
		60			+			
		80		-	-		+	
		100	-	-		-		
		120	-	-		-		
Potassium persulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Potassium sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium sulphite	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Potassium thiosulphate	Saturated aqueous	20	+	+	+		+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Propionic acid	usual technical	20	-	-	*	-	*	
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
iso-Propyl alcohol	Usual technical	20			+	-	+	+
		40			+	-	+	+
		60			+	-	+	+
		80		-		-		
		100	-	-		-		
		120	-	-		-		
Propylene glycol	Usual technical	20	+	+	+	-	+	+
		40	+	+		-		
		60	+	+		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Pyridine	Usual technical	20	-	-	-	-	0	-
		40	-	-	-	-	0	-
		60	-	-	-	-	0	-
		80	-	-	-	-	0	-
		100	-	-	-	-		-
R		120	-	-	-	-		-
Recitified spirit	Usual commercial	20	-	+	+	-	+	+
		40	-			-		
		60	-			-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Refrigerant 22	Usual commercial	20	-	-		0	-	-
		40	-	-		0	-	-
		60	-	-		0	-	-
		80	-	-		0	-	-
		100	-	-		-	-	-
S		120	-	-		-	-	-
Saltpetre	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sea water	From anywhere	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Slaked lime (see note 6)	Saturated aqueous	20	+	+	+		+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Soda water	Usual commercial	20	+	+	+		+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Sodium acetate	Saturated aqueous	20	+	+	*	+	*	*
		40	+	+	*	+	*	*
		60	+	+	*	+	*	*
		80	-	-	*	+	*	*
		100	-	-		-		
		120	-	-		-		
Sodium aluminate	Saturated aqueous	20	+	+	*	+	*	*
		40	+	+	*	+	*	*
		60	+	+	*	+	*	*
		80		-	*	+	*	*
		100	-	-		-		
		120	-	-		-		
Sodium benzoate	Saturated aqueous	20		+	*	+	*	*
		40		+	*	+	*	*
		60		+	*	+	*	*
		80		-	*	+	*	*
		100	-	-		-		
		120	-	-		-		
Sodium bicarbonate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium bisulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium bisulphite	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium bromate (see note 13)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Sodium bromide (see note 14)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium carbonate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium chlorate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+	*	*
		60	+	+	+	+	*	*
		80	-	-	+	+	*	*
		100	-	-		-		
		120	-	-		-		
Sodium chloride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium cyanide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium dichromate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium ferrocyanide	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium fluoride	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium hydroxide 20%	Aqueous	20	+	+	+	+	+	*
		40	+	+	+	+	+	
		60	+	+	+	+	+	
		80	-	-	+	+	+	
		100	-	-		-		
		120	-	-		-		
Sodium hydroxide	Saturated aqueous	20	+	+	+	+	+	-
		40	+	+	+	+	+	-
		60	+	+	+	+	+	-
		80	-	-	+	+	+	-
		100	-	-		-		-
		120	-	-		-		-
Sodium hypochlorite 14%	14% Av. Chlorine	20	-	+	-	+	*	*
		40	-		-			
		60	-		-			
		80	-	-	-			
		100	-	-	-	-		
		120	-	-	-	-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Sodium iodide (see note 16)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium metabisulphite	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium metaborate (see note 17)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium nitrate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium nitrite	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium phosphate(s)	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium silicate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium sulphite	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
di-Sodium tetraborate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Sodium thiosulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Soft soap	Emulsified in water	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Spindle oil (see note 5)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Stannic chloride	Saturated aqueous	20		+	+	+		+
		40		+	+	+		
		60		+	+	+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Stannous chloride	Saturated aqueous	20		+	+	+		*
		40		*	*	+		
		60		*	*	+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		
Starch	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Steam	Usual industrial	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
		120	-	-		-		
Stearic acid (see note 3)	Suspended aqueous	20	+	+	+		+	*
		40	+	+	+		+	
		60	+	+	+		+	
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Stoddard solvent	Usual commercial	20	-		-		-	+
		40	-		-		-	
		60	-		-		-	
		80	-	-	-		-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Sulphamic acid	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Sulphur (see note 3)	Suspended aqueous	20	+	+	+	+		
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Sulphur dioxide gas (dry)	Usual technical	20		+	+		*	*
		40		+	*			
		60		+	*			
		80		-	*			
		100	-	-		-		
		120	-	-		-		
Sulphur dioxide gas (wet)	Usual technical	20	-		+		*	*
		40	-		*			
		60	-		*			
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Sulphur dioxide liquid	Usual technical	20	-	-				*
		40	-	-				
		60	-	-				
		80	-	-				
		100	-	-		-		
		120	-	-		-		

+ Resistant * Likely to be resistant 0 Unlikely to be resistant - Unsuitable No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Sulphuric acid 10%	Aqueous	20	+	+	+	+	+	+
		40	+	+	+	+		+
		60	+	+	+	+		+
		80	-	-	+	+		+
		100	-	-		-		
		120	-	-		-		
Sulphuric acid 30%	Aqueous	20	+	+	+	+	-	+
		40	+	+	+	+	-	+
		60	+	+	+	+	-	+
		80	-	-		+	-	+
		100	-	-		-	-	
		120	-	-		-	-	
Sulphuric acid 50%	Aqueous	20	+	+	+	+	-	+
		40		+	+	+	-	+
		60	-	+	+	+	-	+
		80	-	-		+	-	+
		100	-	-		-		
		120	-	-		-		
Sulphuric acid 70% (see note 19)	Aqueous	20	-	+	+	+	-	+
		40	-	+	+	+	-	+
		60	-	+	+	+	-	+
		80	-	-		+	-	+
		100	-	-		-		
		120	-	-		-		
Sulphuric acid 90% (see note 19)	Aqueous	20	-	+	+	+	-	+
		40	-				-	+
		60	-	-			-	+
		80	-	-		-	-	+
		100	-	-		-		
		120	-	-		-		
Sulphuric acid 95%	Aqueous	20	-	-	+	+	-	+
		40	-	-			-	+
		60	-	-			-	+
		80	-	-		-	-	+
		100	-	-		-		
		120	-	-		-		
Sulphuric acid 98%	Aqueous	20	-	-		+	-	+
		40	-	-			-	
		60	-	-			-	
		80	-	-		-	-	
		100	-	-		-	-	
		120	-	-		-	-	
Sulphuric acid, Oleum	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Surfactants (see note 18)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
T		120	-	-		-		
Tannin	10% Aqueous	20		+	+	+	+	+
		40		+				
		60		+				
		80		-				
		100	-	-		-		
		120	-	-		-		
Tartaric acid	Saturated aqueous	20	+	+	+	+		+
		40	+	+	+			
		60	+	+	+			
		80	-	-				
		100	-	-		-		
		120	-	-		-		
1,1,1,2,2,- Tetrachloroethane	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-		
		60	-	-	-	-		
		80	-	-	-	-		
		100	-	-	-	-		
		120	-	-	-	-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Tetrahydrofuran	Usual technical	20	-	-	0	-	-	-
		40	-	-	0	-	-	-
		60	-	-	0	-	-	-
		80	-	-	0	-	-	-
		100	-	-	0	-		
		120	-	-	0	-		
Tetralin	Usual technical	20	-	-	-		-	
		40	-	-	-		-	
		60	-	-	-		-	
		80	-	-	-		-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Thionyl chloride	Usual technical	20	-	-	-	-		0
		40	-	-	-	-		
		60	-	-	-	-		
		80	-	-	-	-		
		100	-	-	-	-		
		120	-	-	-	-		
Toluene	Usual technical	20	-	-	-	-	-	
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Tomato Juice	Usual commercial	20	+	+	+	+	+	+
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Transformer oil (see note 5)	Usual industrial	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
Tri-*n*-butyl phosphate	Usual technical	20	-	-		-	-	-
		40	-	-		-	-	-
		60	-	-		-	-	-
		80	-	-		-	-	-
		100	-	-		-	-	-
		120	-	-		-	-	-
Trichlorobenzene(s)	Usual technical	20	-	-	0	-	-	*
		40	-	-	0	-	-	
		60	-	-	0	-	-	
		80	-	-	0	-	-	
		100	-	-	0	-	-	
		120	-	-	0	-	-	
Trichloroethylene	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	+
		60	-	-	-	-	-	+
		80	-	-	-	-	-	
		100	-	-	-	-	-	
		120	-	-	-	-	-	
Tricresyl phosphate	Usual industrial	20	-	-	0	-	*	+
		40	-	-	0	-		
		60	-	-	0	-		
		80	-	-	0	-		
		100	-	-	0	-		
		120	-	-	0	-		
Turpentine	Usual commercial	20	-		-	-	-	+
		40	-		-	-	-	+
		60	-		-	-	-	+
		80	-	-	-	-	-	
		100	-	-	-	-	-	
U		120	-	-	-	-	-	
Urea	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Uric acid (see note 3)	Suspended aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
V		120	-	-		-		
Vaseline	Usual technical	20	+	+				+
		40	+	+				
		60	+	+				
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Vinegar	Usual commercial	20	+	+	+	+	+	-
		40		+	*	+		-
		60		+		+		-
		80		-		+		-
		100	-	-		-		-
		120	-	-		-		-
Vinoleo 77/14	Proprietary grease	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Vinyl acetate	Usual industrial	20	-	-		-		
		40	-	-		-		
		60	-	-		-		
		80	-	-		-		
		100	-	-		-		
W		120	-	-		-		
Water	Technical/ Domestic and Ultra Pure	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		
Water glass	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-		+	+	+
		100	-	-		-		
		120	-	-		-		
Wetting agents (see note 5)	Usual proprietary	20						
		40						
		60						
		80		-				
		100	-	-		-		
		120	-	-		-		
White spirit	Usual commercial	20	-		-		-	+
		40	-		-		-	
		60	-		-		-	
		80	-	-	-		-	
		100	-	-	-	-	-	
X		120	-	-	-	-	-	
Xylene	Usual technical	20	-	-	-	-	-	+
		40	-	-	-	-	-	
		60	-	-	-	-	-	
		80	-	-	-	-	-	
		100	-	-	-	-	-	
Y		120	-	-	-	-	-	
Yeast	Suspended aqueous	20	+	+	+	+	+	+
		40				+		
		60				+		
		80		-		+		
		100	-	-		-		
		120	-	-		-		

Chemical & Conc	Usage	°C	ABS	PVC-U	PP	C-PVC	EPDM	FPM
Z								
Zinc bromide 40%	Aqueous	20	+	+	*			
		40		+				
		60		+				
		80		-				
		100	-	-		-		
		120	-	-		-		
Zinc bromide 60%	Aqueous	20	-	+	*			
		40	-	+				
		60	-	+				
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Zinc carbonate (see note 6)	Saturated aqueous	20	+	+	+		+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Zinc chloride 40%	Aqueous	20	+	+	*			
		40		+				
		60		+				
		80		-				
		100	-	-		-		
		120	-	-		-		
Zinc chloride 60%	Aqueous	20	-	+	*			
		40	-	+				
		60	-	+				
		80	-	-				
		100	-	-		-		
		120	-	-		-		
Zinc nitrate	Saturated aqueous	20	+	+	+	+	*	*
		40	+	+	+	+		
		60	+	+	+	+		
		80	-	-		+		
		100	-	-		-		
		120	-	-		-		
Zinc oxide (see note 6)	Saturated aqueous	20	+	+	+		+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Zinc phosphate(s) (see note 3)	Suspended aqueous	20	+	+	+		+	+
		40	+	+	+		+	+
		60	+	+	+		+	+
		80	-	-	+		+	+
		100	-	-		-		
		120	-	-		-		
Zinc sulphate	Saturated aqueous	20	+	+	+	+	+	+
		40	+	+	+	+	+	+
		60	+	+	+	+	+	+
		80	-	-	+	+	+	+
		100	-	-		-		
		120	-	-		-		

[+] Resistant [*] Likely to be resistant [0] Unlikely to be resistant [-] Unsuitable [ ] No data

ASTORE UK - TERMS AND CONDITIONS OF SALE

1. DEFINITIONS
"Seller" shall mean Glynwed Pipe Systems Limited, Registered in England under number 1698059. "Buyer" shall mean any company, organisation or individual to whom a quotation is offered, or whose order is accepted by the Seller.

2. CONDITIONS
All offers, quotations, estimates, acceptances and contracts are subject to these Conditions of Business and any terms or conditions which any other person shall seek to impose or make part of any contract shall, so far as is inconsistent with these Conditions of Business, not apply unless expressly agreed by the Seller in writing. The headings in these conditions are for convenience only and shall not affect their interpretation.

3. QUOTATIONS AND PRICE VARIATION
a) Any quotation given by the Seller is an invitation to the Buyer to make an offer only and no order of the Buyer placed with the Seller in pursuance of a quotation or otherwise shall be binding on the Seller unless and until it is accepted in writing by the Seller.

b) Unless stated otherwise, all quotations and published price lists are ex works, exclusive of VAT and shall remain valid for 30 days or such a period as may be quoted but nevertheless the Seller may amend or withdraw any quotation by written or oral notice. Quotations may be varied if the Buyer makes variations in his specifications.

4. STATEMENTS OR REPRESENTATIONS TO THE BUYER
If any statement or representation has been made to the Buyer upon which the Buyer relies other than in the documents enclosed with the Seller's quotation, the Buyer must set out that statement or representation in a document to be attached to or endorsed on the order in which case the Seller may submit a new quotation.

5. DELIVERY - TIME
a) Any period for delivery given at any time and in any manner by the Seller is an estimate only and is not binding on the Seller. Delivery periods are normally calculated from the later of:
i) acceptance of order; or
ii) where applicable, the receipt by the Seller of a detailed specification or drawings.

b) Time shall not be deemed to be of the essence of the contract. Failure by the Seller to meet any quoted delivery period for any part or the whole of the order shall not entitle the Buyer to rescind the contract or to claim damages of any nature.

c) The Seller will endeavour to comply with reasonable requests by the Buyer for postponement of delivery but shall be under no obligation to do so. Where delivery is postponed otherwise than due to default by the Seller the Buyer shall pay all costs and expenses including a reasonable charge for storage and transportation occasioned thereby and an extra charge for split delivery if applicable.

d) The Buyer will receive delivery of any consignment between the hours of 8.00am and 4.00pm Monday to Friday inclusive, unless otherwise agreed in writing. Cost incurred by the Seller arising from the Buyer's refusal to accept consignments within the agreed hours shall be borne by the Buyer.

6. DELIVERY AND RISK
a) Except where stated to the contrary in the contract, delivery shall be made as follows:
i) where the Buyer provides the transport, delivery shall be made ex the Seller's works;
ii) where the Seller provides the transport, delivery shall be made to the premises of the Buyer, or the premises of the Buyer's customer or works site if the Buyer has requested delivery to be so made but where the Buyer has made such a request the Seller will make a first delivery to the Buyer's customer or works site as so much of the goods as is available for that delivery but subsequent deliveries will be made to the premises of the Buyer.

b) The Seller may at its discretion make partial delivery of orders and invoice the same.

c) Risk in the goods shall pass on delivery.

d) Where goods are sent FOB the Seller's responsibility shall cease when the goods are placed on board ship or aircraft without the need for the Seller to give notice to the Buyer and the provisions of Section 32(3) of the Sale of Goods Act 1979 shall not apply.

7. OWNERSHIP OF GOODS
a) The goods shall remain the sole and absolute property of the Seller as legal and equitable owner until such time as the Buyer shall have paid to the Seller the contract price together with the full price of any other goods the subject of any contract between the Seller and the Buyer.

b) The Buyer acknowledges that until such time as the property in the goods passes to the Buyer he is in possession of the goods as a bailee and fiduciary agent for the Seller and the Purchaser shall store the goods in such a manner that they are clearly identifiable as the property of the Seller.

c) Until payment due under all contracts between the Buyer and the Seller had been made in full, in the event of sale of the goods by the Buyer:
i) the Seller shall be entitled to trace all proceeds of sale received by the Buyer through any bank or other account maintained by the Buyer; and
ii) the Buyer shall if requested by the Seller in writing to so assign its rights to recover the selling price of the goods from the third parties concerned. Such monies to be held separately by the Buyer as agent on behalf of the Seller.

8. TERMS OF PAYMENT
In the event of default in payment according to the agreed payment terms between the Seller and the Buyer – ie: by the end of the month following the month of despatch of the goods the Seller shall be entitled without prejudice to any other right or remedy to suspend all further deliveries and to charge interest on any amount outstanding at the rate of 2% per month until payment in full is made (a part of a month being treated as a full month for the purpose of calculating interest).

9. SHORTAGES AND DEFECTS APPARENT ON DELIVERY
a) It shall be the responsibility of the Buyer to inspect or arrange for an inspection of the goods on delivery whether the goods are delivered to the Buyer's premises or to the premises of the Buyer's customer or to a works site. If no such inspection is made the Buyer shall be deemed to have accepted the goods.

b) The Buyer shall have no claim for shortages or defects apparent on inspection unless:
i) a written complaint is made to the Seller within three days of receipt of the goods specifying the shortage or defect; and
ii) the Seller is within seven days of receipt of the complaint given an opportunity to inspect the goods and investigate the complaint before any use is made of the goods.

c) If a complaint is not made to the Seller as herein provided then in respect of such shortages or defects the goods shall be deemed to be in all respects in accordance with the contract and the Buyer shall be bound to pay for the same accordingly.

10. CLAIMS FOR DEFECTS NOT APPARENT ON INSPECTION
a) The Buyer shall have no claim for defects not apparent on inspection unless the Seller is notified of defective workmanship or materials within twelve months from delivery of the goods. Provided that the goods have been installed and applied in accordance with any relevant recommendations made by the Seller, the Seller will at its option replace the goods or refund the net invoiced price in respect of the goods which have been shown to be defective. If the Seller does so supply substitute goods the Buyer shall be bound to accept such substituted goods in full satisfaction of the obligations of the Seller under the contract.

b) The Buyer shall in any event have no claim or set-off in respect of defects unless a written complaint is sent to the Seller as soon as the defect is noticed and no use is made of the goods thereafter or alteration made thereto by the Buyer before the Seller is given an opportunity to inspect the goods.

c) The Buyer is responsible for ensuring that the goods are fit for any particular purpose, and no warranty or condition of fitness for any particular purpose is to be implied into the contract.

11. LIABILITY
Save as stated in Conditions 9 and 10 (and save in respect of death or personal injury resulting from the negligence of the Seller its servants or agents) the Seller shall not be liable for any claim or claims for direct or indirect consequential or incidental injury loss or damage made by the Buyer against the Seller whether in contract or in tort (including negligence on the part of the Seller its servants or agents) arising out of or in connection with any defect in the goods or their fitness or otherwise for any particular purpose or any act omission neglect or default of the Seller its servants or agents in the performance of the contract.

12. FORCE MAJEURE
Notwithstanding anything herein contained neither the Buyer nor the Seller is to be held liable for any delay or failure to carry out the contract due wholly or in part to an act of God action by any Government whether British or foreign civil war strikes and/or lockouts wheresoever occurring fire trade disputes floods or unfavourable weather or any material becoming unavailable or irreplaceable (whether at all or at commercially acceptable prices) or any other circumstances beyond the control of the Seller.

13. SUB-CONTRACTING
The Seller reserves the right to sub-contract the fulfilment of any order or any part thereof.

14. INSOLVENCY AND BREACH OF CONTRACT
In the event that:
a) the Buyer commits any breach of the contract and fails to remedy such breach (if capable of remedy) within a period of thirty days from receipt of a notice in writing from the Seller requesting such remedy; or

b) any distress or execution is levied upon any of the goods or property of the Buyer; or

c) the Buyer offers to make any arrangements with or for the benefit of its creditors or (if an individual) becomes subject to a petition for a bankruptcy order or (being a limited company) has a receiver appointed of the whole or any part of its undertaking property or assets; or

d) an order is made or a resolution is passed or analogous proceedings are taken for the winding up of the Buyer (save for the purpose of reconstruction or amalgamation with insolvency and previously approved in writing by the Seller) the Seller shall thereupon be entitled without prejudice to its other rights hereunder forthwith to suspend all further deliveries until the default has been made good or to determine the contract and any unfulfilled part thereof or at the Seller's option to make partial deliveries. Notwithstanding any such termination the Buyer shall pay to the Seller at the contract rate for all the goods delivered up to and including the date of termination.

15. INDUSTRIAL PROPERTY RIGHTS
If goods supplied by the Seller to the Buyer's design or specifications infringe or are alleged to infringe any patent or registered design right or copyright the Buyer will indemnify the Seller against all damages, costs and expenses incurred by the Seller as a result of the infringement or allegation. The Buyer will give the Seller all possible help in meeting any infringement claim brought against the Seller.

16. BUYER'S ERROR IN ORDERING
In the event the Buyer orders incorrectly the Seller will be under no obligation to the Buyer to rectify or assist in rectifying the error.

17. LAW AND JURISDICTION
The contract shall be subject in all respects to English Law and to the jurisdiction of the English Courts.

Astore UK reserves the right to modify the details in this publication as products and specifications are updated and improved.

The content of this publication is for general information only and it is the user's responsibility to determine the suitability of any product for the purpose intended.

For further information on all Astore UK products and services contact our Customer Services Team as detailed below.

Astore UK is a trade name of Glynwed Pipe Systems Ltd.
Company number 1698059.

Registered office
Astore UK
Walsall Road
Norton Canes
Cannock
Staffordshire
WS11 9NS
United Kingdom

ASTORE
THERMOPLASTIC PIPEWORK SYSTEMS

ASTORE UK
Walsall Road, Norton Canes, Cannock, Staffordshire WS11 9PU
Telephone: +44 (0)1543 272400 • Fax: +44 (0)1543 272413
E-mail: sales@astore.uk.com • Website: www.astore.co.uk

LCR10200 April 2009

an Aliaxis company