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CHEMICAL REISTANCE CHART FOR POLYETHYLENE TANKS

The resins used in the manufacture of Industrial Containers are highly resistant to most aggressive chemicals.

The following chart gives an excellent guide to the performance of containers with most common chemicals.

Under normal conditions the following legend should be followed.

R - Resistant.
N - Non Resistant.
O - Resistance is variable depending upon the exact conditions of use as well as residual stresses in the containers.

Containers are 100% stress free and therefore likely to be more resistant than other injection or blow moulded products. Yet final recommendation will be based on actual trials.

All information given below is based on data collected from reliable sources and limited experience but without warranty.

You are requested to consult us for final recommendations or conduct experiments at your end.

Chemical	Concentration	20°C	60°C
Acetaldehyde	40%	O	N
Acetaldehyde	100%	O	N
Acetic Acid	100% Aqueous	R	R
Acetic Acid	60%	R	R
Acetic Acid	Glacial	R	R
Acetic Anhydride		N	N
Aceto acetic ester		R	R
Acetone		N	N
Adipic Acid		R	O
Allyl Alcohol		R	N
Allyl Chloride		O	N
Alum		R	R
Aluminium Acetate		R	R
Aluminium Chloride		R	R
Aluminium Fluoride		R	R
Aluminium Hydroxide		R	R
Aluminium Oxalate		R	R
Aluminium Sulphate		R	R
Ammonia	Aqueous Soln.	R	R
Ammonia	s.g 0.88	R	R
Ammonia	Dry Gas	R	R
Ammonium bicarbonate		R	R
Ammonium carbonate		R	R
Ammonium chloride		R	R
Ammonium hydrosulfide		R	R
Ammonium hydroxide		R	R
Ammonium metaphosphate		R	R
Ammonium nitrate		R	R
Ammonium oxalate		R	R
Ammonium persulfate		R	R
Ammonium sulphate		R	R
Ammonium sulphide		R	R
Ammonium thiocyanate		R	R
Amyl Acetate		N	N
Amyl Alcohol		R	R
Aniline		N	N
Aniline hydrochloride		N	N
Aniline sulphate		O	N
Animal Oils		O	N
Antimony		R	R
Antimony pentachloride		R	R

Chemical	Concentration	20°C	60°C
Antimony trichloride		R	R
Aqua regia	Concentration	N	N
Arsenic Acid		R	R
B			
Barium carbonate		R	R
Barium chloride		R	R
Barium hydroxide		R	R
Barium sulphate		R	R
Barium sulphide		R	R
Beer		R	R
Benzaldehyde		N	N
Benzene		N	N
Benzonic Acid		R	R
Benzyl Alcohol		N	N
Bismuth carbonate		R	R
Borax		R	R
Boric Acid		R	R
Boron trifluoride		R	R
Brine		R	R
Bromine	Dry Gas/Liquid	N	N
Butane		R	R
Butanediol		R	R
Butyl Alcohol		R	R
Butyraldehyde		N	N
Butyric Acid		N	N
C			
Calcium bisulphite		R	R
Calcium carbonate		R	R
Calcium chlorate		R	R
Calcium chloride		R	R
Calcium hydrochlorite		R	R
Calcium hydroxide		R	R
Calcium nitrate		R	R
Calcium phosphate		R	R
Calcium sulphate		R	R
Camphor oil		O	-
Carbon dioxide		R	R
Carbon disulphide		N	-
Carbon monoxide		R	R
Carbon tetrachloride		O	N
Carbonic Acid		R	R

Chemical	Concentration	20°C	60°C
Castor oil		R	R
Cetyl Alcohol		N	N
Chloral hydrate		N	N
Chlorine	Dry Gas/Liquid	N	N
Chlorine water	2% aqueous	R	R
Chlorine water	Sat. soln.	R	R
Chlorobenzene		N	N
Chloroform		O	N
Chlorosulphonic Acid		N	N
Chrome alum		R	-
Chromic Acid		R	R
Cider		R	R
Citric Acid		R	R
Copper Chloride		R	R
Copper cyanide		R	R
Copper nitrate		R	R
Copper sulphate		R	R
Creosote		N	N
Cresols		N	N
Cresylic (crude) Acid		N	N
Cupric chloride		R	R
Cupric nitrate		R	R
Cyclohenxanone		N	N
Cyclohexanol		N	N
D			
Detergents, Synthetic		R	R
Developers Photographic		R	R
Dextrin		R	R
Dextrose		R	R
Dibutye Phthalate		O	O
Dichlorobenzene		N	N
Diethyl ether		N	N
Diethyl glycol		R	R
Dimethyl carbinol		R	R
Dioctyl phthalate		O	N
Disodium phosphate		R	R
E			
Ehter		N	
Ehtyl chloride		N	N
Emulsifiers	all Conc.	R	R
Emulsions, Photographic		R	R

Chemical	Concentration	20°C	60°C
Ethyl acetate		O	N
Ethyl Alcohol	40% Aqueous	R	R
Ethyl Alcohol	100%	R	R
Ethyl butyrte		O	N
Ethylene chloride		N	N
Ethylene glycol		R	R
Ethylene oxide		R	-
F			
Ferric chloride		R	R
Ferric nitrate		R	R
Ferric sulphate		R	R
Ferrous ammonium citrate		R	R
Ferrous chloride		R	R
Ferrous sulphate		R	R
Fixing solutions, Photographic		R	R
Fluorine		O	N
Fluorosilicic	40%	R	R
Fluorosilicic	Concentration	R	-
Fluorosilicic	3% Aqueous	R	R
Formaldehyde	40% Aqueous	R	R
Formic Acid	10%	R	R
Formic Acid	25%	R	R
Formic Acid	50%	R	R
Formic Acid	100%	R	R
Fructose		R	R
Fruit Pulp		R	R
G			
Gallic Acid		R	R
Gin		R	R
Glucose		R	R
Glycerine		R	R
Glycol		R	R
Glycolic Acid		R	R
Grapesugar	Sat. soln. alc.	R	R
H			
Heptane		O	O
Hertiary Hexanol		R	R
Hexadecanol		N	N
Hydrobromic Acid	50% Aqueous	R	R
Hydrobromic Acid	100%	R	R
Hydrochloric Acid	10% Aqueous	R	R

Chemical	Concentration	20°C	60°C
Hydrochloric Acid	22%	R	R
Hydrochloric Acid	Conc.	R	R
Hydrocyanic Acid	10%	R	R
Hydrofluoric Acid	4% Aqueous	R	R
Hydrofluoric Acid	40%	R	R
Hydrofluoric Acid	66%	R	R
Hydrofluoric Acid	Conc.	R	R
Hydrogen		R	R
Hydrogen bromide Dry		R	R
Hydrogen chloride Dry		R	R
Hydrogen peroxide		R	R
Hydrogen peroxide	3% (10 vols)	R	R
Hydrogen peroxide	12% (14 vols)	R	R
Hydrogen peroxide	30% (100 vols)	R	N
Hydrogen peroxide	90% & above	R	N
Hydrogen phosphide		R	R
Hydrogen sulphide		R	R
Hydroquinone		R	R
Hypochlorous Acid		R	R
I			
Inks		R	R
Iodine		O	-
Isopropyl Alcohol		R	R
L			
Latic Acid	100%	R	R
Lead acetate		R	R
Lead arsentate		R	R
Lead nitrate		R	R
Lead tetra-ethyl		R	R
Linseed oil		O	N
Lube oil		N	N
M			
Magnesium carbonate		R	R
Magnesium chloride		R	R
Magnesium hydroxide		R	R
Magnesium nitrate		R	R
Magnesium sulphate		R	R
Maleic Acid	25% Aqueous	R	R
Maleic Acid	50%	R	R
Maleic Acid	Concentration	R	R
Manganese sulphate		R	R

Chemical	Concentration	20°C	60°C
Mercuric chloride		R	R
Mercuric cyanide		R	R
Mercurous nitrate		R	R
Mercury		R	R
Metallic soaps		R	R
Methyl acetate		N	N
Methyl Alcohol	6% Aqueous	R	R
Methyl Alcohol	100%	R	R
Methyl bromide		N	N
Methyl chloride		N	N
Methyl ethyl ketone		O	N
Methyl isobutyl ketone		N	N
Methylated spirit		R	R
Methylene chloride		O	N
Methylsulphuric Acid	50% Aqueous	R	R
Milk		R	R
Milneral oils		R	O
Molasses		R	R
Monochlorobenzene		N	N
N			
Naphthalene		O	-
Naptha		O	N
Nickel chloride		R	R
Nickel sulphate		R	R
Nicotine		R	R
Nicotinic Acid		R	R
Nitric Acid	5% Aqueous	R	R
Nitric Acid	10%	R	R
Nitric Acid	35%	R	R
Nitric Acid	50-100%	N	N
Nitrobenzene		N	N
O			
Octyl Alcohol		R	R
Oleic Acid		N	N
Oxalic Acid		R	R
Oxygen		R	R
Ozone		N	N
P			
Palmitic Acid		R	R
Paraffin		O	N
Perchloric Acid		R	R

Chemical	Concentration	20°C	60°C
Petrol		N	N
Petroleum ether		N	N
Phenol		N	N
Phosgene	Gas	R	N
Phosphoric Acid	25% Aqueous	R	R
Phosphoric Acid	50%	R	R
Phosphoric Acid	90%	R	O
Phosphoric Acid	95% Aqueous	O	N
Phosphorous oxychloride		N	N
Phosphorous pentoxide		R	R
Phosphorous trichloride		R	R
Photographic developers		R	R
Photographic emulsions		R	R
Photographic fixing solutions		R	R
Picric Acid	1%	R	
Potassium acid sulphate		R	R
Potassium antimonate		R	R
Potassium bicarbonate		R	R
Potassium birate		R	R
Potassium bisulphate		R	R
Potassium bisulphide		R	R
Potassium bromate		R	R
Potassium bromide		R	R
Potassium carbonate		R	R
Potassium chlorate		R	R
Potassium chloride		R	R
Potassium chromate		R	R
Potassium cuprocyanide		R	R
Potassium cyanide		R	R
Potassium dichromate		R	R
Potassium ferrocyanide		R	R
Potassium fluoride		R	R
Potassium hydroxide	1% aqueous	R	R
Potassium hydroxide	10%	R	R
Potassium hydroxide	Concentration	R	R
Potassium hypochlorite		R	R
Potassium nitrate		R	R
Potassium perborate		R	R
Potassium perchlorate	10%	R	R
Potassium permanganate		R	R
Potassium persulphate		R	R

Chemical	Concentration	20°C	60°C
Potassium phosphate		R	R
Potassium sulphate		R	R
Potassium sulphide		R	R
Potassium terricyanide		R	R
Potassium thiosulphate		R	R
Propargyl Alcohol		R	R
Propylene chloride		R	R
Propylene glycol		R	N
S			
Salenic Acid		R	R
Salicylic Acid		R	R
Sea water		R	N
Shortening		R	R
Silicic Acid		R	R
Silicone fluids		O	N
Silver cyanide		R	R
Silver nitrate		R	R
Soap Solution		R	R
Sodium acetate	Saturated soln.	R	R
Sodium aluminate		R	R
Sodium antimonate		R	R
Sodium benzoate		R	R
Sodium bicarbonate		R	R
Sodium bisulphate		R	R
Sodium borate		R	R
Sodium bromide		R	R
Sodium carbonate		R	R
Sodium chlorate		R	R
Sodium chloride		R	R
Sodium cyanide		R	R
Sodium dichromate		R	R
Sodium ferricyanide		R	R
Sodium ferrocyanide		R	R
Sodium fluroide		R	R
Sodium hydroxide	1% aqueous	R	R
Sodium hydroxide	40%	R	R
Sodium hydroxide	Concentration	R	R
Sodium hypochoride	15% chlorine	R	R
Sodium metaphosphate		R	R
Sodium nitrate		R	R
Sodium perborate		R	R

Chemical	Concentration	20°C	60°C
Sodium peroxide		R	R
Sodium phosphate		R	R
Sodium silicate		R	R
Sodium sulphate		R	R
Sodium sulphate	25% Aqueous	R	R
Sodium sulphate	Concentration	R	R
Sodium sulphite		R	R
Sodium thiosulphate		R	R
Soft soap		R	R
Stannic chloride		R	R
Stannous chloride		R	R
Starch		R	R
Stearic Acid		R	R
Sulphur	Calloidal	R	R
Sulphur	Dry	R	R
Sulphur	Moist	R	R
Sulphur trioxide		N	N
Sulphuric Acid	10% Aqueous	R	R
Sulphuric Acid	20%	R	R
Sulphuric Acid	40%	R	R
Sulphuric Acid	50%	R	R
Sulphuric Acid	60%	R	R
Sulphuric Acid	70%	R	O
Sulphuric Acid	98%	O	N
Sulphurous Acid	10%	R	-
Sulphurous Acid	30%	N	N
Surface active agents (Emulsifiers synthetic detergents & wetting agents	Normal dilutions	R	R
T			
Tallow		R	R
Tannic Acid		R	R
Tanning extracts		R	R
Tartaric Acid	10%	R	R
Tetrahydrofuran		O	N
Tetrahydronaphthalene		N	N
titanium trichloride		N	N
Toluene		O	O
Transformer oil		O	N
Trichlorethylene		N	N
Trichlorobenezene		N	N

Chemical	Concentration	20°C	60°C
Tricresyl phosphate		O	N
Triethanolamine		O	N
Trisodium phosphate		R	R
Tritoiyl phosphate		N	N
Turfuryl Alcohol		O	-
Turpentine		O	N
U			
Urea		R	R
Urine		R	R
V			
Vanilla extract		R	R
Vegetable oils		O	N
Vinegar		R	R
W			
Water		R	R
Wetting agents	Normal dilutions	R	R
Whey		R	R
Wine and Spirit		R	R
X			
Xylene		O	O
Y			
Yeast		R	R
Z			
Zinc Chloride		R	R
Zinc oxide		R	R
Zinc sulphate		R	R