

T24 Selection Table

T24: Chemical resistance of plastic materials

		Cable and lead designation									
		at temp +°C	Polyamide PA 6	Polyamide PA 6.6	Polyamide PA 12	Thermoplastic Polyurethane PU	Polypropylene PP	Polyethylene HD-PE	Polyethylene LD-PE	Polystyrene PS	Nitrile Butadiene rubber NBR
Reagents	concentration										
The information is given to the best of our knowledge and experience, but must be regarded as being for the guidance only. A definite judgement depends in most cases on tests under actual working conditions.											
Exhaust gases, containing carbon dioxide	any	60						■	■		
Waste gas, containing SO ₂	low	60						■	■		
Acetaldehyde	40%	20	■	■	■		■				20 °C ■
Acetone	100%	20	■	■	■	□	■	■	■		□
Acrylic acid	100%	>30	□	□	□						□
Alums, hydrous	dilute	40					■	■	■	■	20 °C ■
Allyl alcohol	96%	20	■	■	■	■	■	■	20 % ■		
Aluminum chloride, hydrous	dilute	40					■	■	■	■	20 °C ■
Aluminum sulphate, hydrous	dilute	40					■	■	■	■	20 °C ■
Formic acid, hydrous	10%	20	■	■	■		■	■		■	
Ammonia solution, hydrous	saturated	20	20 % ■	20 % ■	20 % ■		■	■	■	25 % ■	
Ammonium chloride, hydrous	saturated	60				3 % ■	■	■	■		20 °C ■
Ammonium nitrate, hydrous	dilute	40					■	■	■	■	20 °C ■
Ammonium sulphate, hydrous	dilute	40					■	■	■		□
Aniline, pure	100%	20	■	■	■		■	■	■	□	
Anilin hydrochloride, hydrous	saturated						■	■	■		
Benzaldehyde, hydrous	saturated	20	pure ■	pure ■	pure ■		■	■	■	□	□
Benzine	100%	20	■	■	■		■	■	■	□	■
Benzoic acid, hydrous	any	40	20 % ■	20 % ■			■	■	■	■	□
Benzole	100%	20	■	■	■		■	■	■	□	□
Bleaching liquor	12.5 Cl	20	□	□	■	3 % □	■	■	■	■	□
Drilling oil	any	20	□	□	□		□	□	□	□	□
Chrome alum, hydrous	dilute	40					■	■	■		20 °C ■
Cyclohexanol	-	20	■	■	■		■	■	■	■	■
Diesel fuel		85	■	■	■	20 °C ■	20 °C ■	20 °C ■	20 °C ■		
Potassium chloride, hydrous	10%	20	■	■	■		■	■	■	■	■
Acetic acid	100%	20					■	■	■		■
Ethanoic acid	10%	20	■	■	■	3 % ■	■	■	■	■	
Ehtyl alcohol, hydrous	10%	20	40 Vol% ■	40 Vol% ■	40 Vol% ■			■		■	
Ethyl dichloride	100%	20					■	□	□		□
Ethylenoxid	100%	20					■				
Ehtyl ether	100%	20					■				■
Ferric cyanide, hydrous	saturated	60					■	■	■		
Fluorine	50%	40	pure □	pure □	pure □	□	□	□			
Formaldehyde, hydrous	dilute	40	pure ■	pure ■	pure ■		40 % ■	40 % ■	40 % ■	30 % ■	20 °C ■
Glucose, hydrous	any	50					■	■	■		
Urea, hydrous	to 10%	40	20 % ■	20 % ■	20 % ■		■	■	■	■	
Hydraulic fluid hardly inflammable	80%	80	■	■	■						
Hydraulic oil H and HL (DIN 51524)	100%	100	■	■	■						
Hydroxylamine sulphate, hydrous	to 12%	30					■				
Caustic soda lye, hydrous	50%	20	■	■	■		■	■	■	■	
Potassium bromide, hydrous	any	20	10 % ■	10 % ■	10 % ■		■	■	■	■	
Potassium chloride, hydrous	10%	20	■	■	■		■	■	■	■	■
Potassium dichromate, hydrous	40%	20	5 % ■	5 % ■	5 % ■		■	■	■		■
Potassium nitrate, hydrous	any	20	10 % ■	10 % ■	10 % ■		■	■	■	■	■
Kaliumpermanganat, hydrous	saturated	20					■			■	
Hydrosilicofluoric acid, hydrous	to 30%	20	□	□			■	■	■		

□ = not consistent
 ■ = provisional consistent
 ■ = consistent

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 APPENDIX

		Cable and lead designation									
		at temp + °C	Polyamide PA 6	Polyamide PA 6.6	Polyamide PA 12	Thermoplastic Polyurethane PU	Polypropylene PP	Polyethylene HD-PE	Polyethylene LD-PE	Polystyrene PS	Nitrile Butadiene rubber NBR
Reagents	concentration										
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Carbon dioxide, dry	100%	60					■	■	■	50 °C ■	20 °C ■
Carbon dioxide	100%	60	■	■	■						20 °C ■
Cresol, hydrous	to 90%	20	pure □	pure □			■	■	▣	▣	□
Cooling liquids DIN 53521		120	▣	▣							
Copper monochloride, hydrous	saturated	20					■	■	■		■
Copper sulphate, hydrous	saturated	60					■	■	■		20 °C ■
Magnesium carbonate, hydrous	saturated	100					■			50 °C ■	
Magnesium chloride, hydrous	saturated	20	10 % ■	10 % ■	10 % ■		■	■	■	■	■
Methyl alcohol	100%	20	■	■	■		40 °C ■	■	■	■	■
Methylene chloride	100%	20	▣	▣	▣		▣	▣	□		
Lactic acid, hydrous	to 90%	20	10 % ■	10 % ■	10 % ■	3 % ▣	■	■	■	80 % ■	■
Mineral oil			■	■	■		20 °C ■	20 °C ■	20 °C ■		
Sodium chlorate, hydrous	saturated	20	10 % ▣	10 % ▣	10 % ▣		■	■	■		
Caustic soda, hydrous	10%	20	■	■	■	3 % ▣	■	■	■	■	■
Nickel chloride, hydrous	saturated	20	10 % ▣	10 % ▣	10 % ▣		■			■	■
Nickel sulphate, hydrous	saturated	20	10 % ▣	10 % ▣	10 % ▣		■			■	■
Nitro glycerin	dilute	20						□	□		
Oil and grease		20	■	■	■		▣				
Oleic acid	-	20	■	■	■		■	■	■	■	▣
Oxalic acid	any	20	10 % ▣	10 % ▣	10 % ▣	3 % ▣	■	■	■	■	▣
Ozone	pure		□	□	□		▣	▣	▣		
Kerosine	100%	80	■	■	■		20 °C ■	20 °C ■	20 °C ▣	□	
Phosgene, gaseous	100%	20					▣	▣	▣		
Phosphoric acid, hydrous	dilute	20	10 % □	10 % □	10 % □	3 % ▣	■	■	■	86 % ■	□
Phosphorus pentoxide	100%	20					■				
Mercury	pure	20	■	■	■		■	■	■	■	■
Nitric acid, hydrous	50%	20	□	□	□	3 % □	▣	▣	▣	30 % ■	□
Hydrochlorid acid, hydrous	30%	20	20 % □	20 % □	20 % □	3 % □	■	■	■	15 % ■	▣
Lubricating grease, base diester oil		110	▣	▣							
Lubricating grease, base polyphenyl ester		110	■	■	■						
Lubricating grease, base silicon oil		110	■	■	■						
Carbon bisulphide	100%	20	■	■	■		■	▣	▣	□	□
Sulphuric sodium, liquid	dilute	40					■	■	■		
Sulphuric acid, hydrous	10%	20	□	□	□	3 % □	50 % ■	50 % ■	50 % ■	■	□
Sea water		40	■	■	■	20 °C ■	■	■	■	■	20 °C ■
Soap solution, hydrous	any	20	dilute ■	dilute ■	dilute ■	■	■	■	■	■	
Carbon tetrachloride	100%	20	■	■	■		□	▣	□	□	
Toluene	100%	20	■	■	■	□		▣	▣	▣	□
Trichloroethylene	100%	20	▣	▣	▣		▣	▣	□		
Vinyl acetate	100%	20					■				
Hydrogen	100%	60	20 °C ■	20 °C ■	20 °C ■		■	■	■		20 °C ■
Xylene	100%	20	■	■	■		□	▣	▣	□	□
Zinc chloride, hydrous	dilute	60	10 % ▣	10 % ▣			■	■	■	50 °C ■	20 °C ■
Zinc sulfate, hydrous	dilute	60					■	■	■		20 °C ■
Zinc chloride, hydrous	dilute	40					■	■	■	□	20 °C ■
Citric acid	to 10%	40	20 °C ■	20 °C ■	20 °C ■	3 % ▣	■	■	■	■	20 °C ■

□ = not consistent
▣ = provisory consistent
■ = consistent