

T24 Technical tables

Chemical resistance of plastics



Reagent	Concentration		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
	at +°C %											
Exhaust gases containing carbon dioxide	all	60							⊗	⊗		
Exhaust gases, containing SO ₂	low	60							⊗	⊗		
Acetaldehyde	40%	20	✗	✗	⊗			⊗				20 °C ⊗
Acetone	100%	20	⊗	⊗	⊗	✗	⊗	✗	✗			✗
Acrylic acid	100%	> 30	✗	✗	✗							✗
Alums, aqueous	diluted	40						⊗	⊗	⊗	⊗	20 °C ⊗
Allyl alcohol	96%	20	✗	✗	⊗	⊗	⊗	⊗	⊗	20% ⊗		
Aluminium chloride, aqueous	diluted	40						⊗	⊗	⊗	⊗	20 °C ⊗
Aluminium sulphate, aqueous	diluted	40						⊗	⊗	⊗	⊗	20 °C ⊗
Formic acid, aqueous	10%	20	✗	✗	⊗			⊗	⊗		⊗	
Ammonia, aqueous	saturated	20	20% ⊗	20% ⊗	20% ⊗			⊗	⊗	⊗	25% ⊗	
Ammonium chloride, aqueous	saturated	60				3% ✗	⊗	⊗	⊗			20 °C ⊗
Ammonium nitrate, aqueous	diluted	40						⊗	⊗	⊗	⊗	20 °C ⊗
Ammonium sulphate, aqueous	diluted	40						⊗	⊗	⊗		✗
Aniline, pure	100%	20	✗	✗	✗			⊗	⊗	⊗	✗	
Aniline hydrochloride, aqueous	saturated							⊗	✗	✗		
Benzaldehyde, aqueous	saturated	20	pure ✗	pure ✗	pure ✗			⊗			✗	✗
Benzene	100%	20	⊗	⊗	⊗			✗	⊗	✗	✗	⊗
Benzoic acid, aqueous	all	40	20% ✗	20% ✗				⊗	⊗	⊗	⊗	✗
Benzole	100%	20	⊗	⊗	⊗			✗	✗	✗	✗	✗
Bleaching liquor	12.5 Cl	20	✗	✗	✗	3% ✗	⊗	⊗	⊗	⊗	⊗	✗
Drilling oil	all	20	✗	✗	✗			✗	✗	✗	✗	✗
Chrome alum, aqueous	diluted	40						⊗	⊗	⊗		20 °C ⊗
Cyclohexanol	-	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	⊗
Diesel fuel		85	⊗	⊗	⊗	20 °C ⊗	20 °C ⊗	20 °C ⊗	20 °C ⊗			
Ferric chloride, aqueous, neutral	10%	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	⊗
Glacial acetic acid	100%	20						⊗	⊗	⊗		✗
Acetic acid	10%	20	✗	✗	⊗	3% ✗	⊗	⊗	⊗	⊗	✗	
Ethyl alcohol, aqueous	10%	20	40 vol% ⊗	40 vol% ⊗	40 vol% ⊗				⊗		⊗	
Ethylene chloride	100%	20						✗	✗	✗		✗
Ethylene oxide	100%	20						✗				
Ethyl ether	100%	20						✗				✗
Potassium ferrocyanide, aqueous	saturated	60						⊗	⊗	⊗		
Fluorine	50%	40	pure ✗	pure ✗	pure ✗	✗	✗	✗				
Formaldehyde, aqueous	diluted	40	pure ⊗	pure ⊗	pure ✗			40% ⊗	40% ⊗	40% ⊗	30% ⊗	20 °C ✗
Glucose, aqueous	all	50						⊗	⊗	⊗		
Urea, aqueous	to 10%	40	20% ⊗	20% ⊗	20% ⊗			⊗	⊗	⊗	⊗	
Flame-retardant hydraulic fluid		80	⊗	⊗	⊗							
Hydraulic oils H and HL (DIN 51524)		100	⊗	⊗	⊗							
Hydroxylamine sulphate, aqueous	to 12%	30						⊗				
Caustic potash, aqueous	50%	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	
Potassium bromide, aqueous	all	20	10% ⊗	10% ⊗	10% ⊗			⊗	⊗	⊗	⊗	
Potassium chloride, aqueous	10%	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	⊗
Potassium dichromate, aqueous	40%	20	5% ✗	5% ✗	5% ✗			⊗	⊗	⊗		⊗
Potassium nitrate, aqueous	all	20	10% ⊗	10% ⊗	10% ⊗			⊗	⊗	⊗	⊗	⊗
Potassium permanganate, aqueous	saturated	20						⊗			⊗	
Hydrosilicofluoric acid, aqueous	to 30%	20	✗	✗				⊗	⊗	⊗		

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- ✗ Limited resistance
- ✗ Not resistant

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	at + °C %												
Carbon dioxide, dry	100%	60						⊗	⊗	⊗		50 °C ⊗	20 °C ⊗
Carbonic acid	100%	60	⊗	⊗	⊗								20 °C ⊗
Cresylic acid, aqueous	to 90%	20	pure ⊗	pure ⊗				⊗	⊗	⊗	⊗	⊗	⊗
Coolant DIN 53521		120	⊗	⊗									
Copper chloride, aqueous	saturated	20						⊗	⊗	⊗			⊗
Copper sulphate, aqueous	saturated	60						⊗	⊗	⊗			20 °C ⊗
Magnesium carbonate, aqueous	saturated	100						⊗				50 °C ⊗	
Magnesium chloride, aqueous	saturated	20	10% ⊗	10% ⊗	10% ⊗			⊗	⊗	⊗	⊗	⊗	⊗
Methyl alcohol	100%	20	⊗	⊗	⊗			40 °C ⊗	⊗	⊗	⊗	⊗	⊗
Methylene chloride	100%	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗		
Lactic acid, aqueous	to 90%	20	10% ⊗	10% ⊗	10% ⊗	3% ⊗		⊗	⊗	⊗		80% ⊗	⊗
Mineral oil			⊗	⊗	⊗			20 °C ⊗	20 °C ⊗	20 °C ⊗			
Sodium chlorate, aqueous	saturated	20	10% ⊗	10% ⊗	10% ⊗			⊗	⊗	⊗			
Sodium hydroxide, aqueous	10%	20	⊗	⊗	⊗	3% ⊗		⊗	⊗	⊗	⊗	⊗	
Nickel chloride, aqueous	saturated	20	10% ⊗	10% ⊗	10% ⊗			⊗				⊗	⊗
Nickel sulphate, aqueous	saturated	20	10% ⊗	10% ⊗	10% ⊗			⊗	⊗	⊗			⊗
Nitroglycerin	diluted	20								⊗	⊗		
Oil and grease		20	⊗	⊗	⊗			⊗					
Oleic acid	-	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	⊗	⊗
Oxalic acid	all	20	10% ⊗	10% ⊗	10% ⊗	3% ⊗		⊗	⊗	⊗	⊗	⊗	⊗
Ozone	pure		⊗	⊗	⊗			⊗	⊗	⊗			
Petroleum	100%	80	⊗	⊗	⊗			20 °C ⊗	20 °C ⊗	20 °C ⊗	⊗	⊗	
Phosgene, gaseous	100%	20						⊗	⊗	⊗			
Phosphoric acid, aqueous	diluted	20	10% ⊗	10% ⊗	10% ⊗	3% ⊗		⊗	⊗	⊗		86% ⊗	⊗
Phosphorus pentoxide	100%	20						⊗					
Mercury	pure	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	⊗	⊗
Nitric acid, aqueous	50%	20	⊗	⊗	⊗	3% ⊗		⊗	⊗	⊗	⊗	30% ⊗	⊗
Hydrochloric acid, aqueous	30%	20	20% ⊗	20% ⊗	20% ⊗	3% ⊗		⊗	⊗	⊗	⊗	15% ⊗	⊗
Lubricating grease, ester oil base		110	⊗	⊗									
Polyphenyl ester base		110	⊗	⊗	⊗								
Lubricating grease, silicone oil base		110	⊗	⊗	⊗								
Carbon disulphide	100%	20	⊗	⊗	⊗			⊗	⊗	⊗	⊗	⊗	⊗
Sodium sulfide, aqueous	diluted	40						⊗	⊗	⊗			
Sulphuric acid, aqueous	10%	20	⊗	⊗	⊗	3% ⊗		50% ⊗	50% ⊗	50% ⊗	⊗	⊗	⊗
Sea water		40	⊗	⊗	⊗	20 °C ⊗		⊗	⊗	⊗	⊗	⊗	20 °C ⊗
Soap solution, aqueous	all	20	diluted ⊗	diluted ⊗	diluted ⊗	⊗		⊗	⊗			⊗	
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, aqueous	diluted	60	10% ⊗	10% ⊗				⊗	⊗	⊗		50 °C ⊗	20 °C ⊗
Zinc sulphate, aqueous	diluted	60						⊗	⊗	⊗			20 °C ⊗
Zinc chloride, aqueous	diluted	40						⊗	⊗	⊗	⊗	⊗	20 °C ⊗
Citric acid	to 10%	40	20 °C ⊗	20 °C ⊗	20 °C ⊗	3% ⊗		⊗	⊗	⊗	⊗	⊗	20 °C ⊗

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