

Chemical resistance of plastics

ÖLFLEX®
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ACCESSORIES
APPENDIX

Reagent	Concentration	at +°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
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 ✘		☒			✘	✘
Benzine	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	✘	✘			☒	☒	☒		

☒ Highly resistant
✘ Limited resistance
✘ Not resistant

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Reagent	Concentration	at + °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
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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