

Resistance in basic chemicals

Name	Formula	NBR	EPDM	FKM	FFKM	CR	PTFE	ETFE	PVC	PP	PA	PVDF	PPS	PEEK	MS	RG	GG, GS	1.4401/1.4571	1.4305/1.4105
Sodium stannate – aqueous	Na ₂ SnO ₃	+	+	+	+	+	+	+	+	+	O				O	O	+	+	+
Sodium sulphate – aqueous	Na ₂ SO ₄	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+	+
Sodium sulphide – aqueous	Na ₂ S	+	+	+	+	+	+	+	+	+	+	O	+	+	O	-	O	+	+
Sodium sulphite – aqueous	Na ₂ SO ₃	+	+	+	+	+	+	+	O	+	+	+		+	O	+	O	+	O
Sodium tartrate – aqueous	C ₄ H ₄ O ₆ Na ₂	+	+	+	+	+	+	+	+	+	+				+	+	O	+	+
Sodium thiosulphate – aqueous	Na ₂ S ₂ O ₃	+	+	+	+	+	+	+	+	+	+	+	+		O	-	O	O	O
Sodium zincate – aqueous	Na ₂ [Zn(OH) ₄]	O	+	+		+	+										+	+	+
Spirit (ethyl alcohol)		O	O	O	+	O	+	+	+	+	O		+	+	O	O	+	+	+
Starch solution – aqueous		+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	+	+
Stearic acid – pure	C ₁₈ H ₃₇ COOH	+	+	+	+	+	+	+	+	+	+	+	+		O	+	-	+	+
Styrene – pure	C ₆ H ₅ CHCH ₂	-	-	O	+	-	+	+	-	O	+	+		+	O	O	O	+	+
Succinic acid – aqueous	HOOCCH ₂ CH ₂ COOH	+	+	+	+	+	+		+	+		+	+		+	+	O	+	+
Sulphur chloride – pure	S ₂ Cl ₂ , SCl ₂ , SCl ₄	-	-	+	+	-	+	+	-	-	-	+		+	O	O	O	+	-
Sulphur dioxide (liquid) – pure	SO ₂	-	+	+	+	-	+	+	-	-	-	+	+	+	+	+	+	+	+
Sulphur dioxide (gaseous and humid)	SO ₂	-	+	+	+	-	+	+	O	O	O	+	O	+	-	-	-	+	O
Sulphur dioxide (gaseous and dry) – pure	SO ₂	-	+	+	+	-	+	+	O	O	O	+	+	+	O	O	O	+	O
Sulphur hexafluoride – pure	SF ₆	O	+	O	O	+	+		+	+		+		+	+	+	+	+	+
Sulphuric acid – concentrated (96%)	H ₂ SO ₄	-	-	O	+	-	+	+	O	O	-	+	O	-	-	-	-	-	-
Sulphuric acid – aqueous (30%)	H ₂ SO ₄	O	+	+	+	O	+	+	O	+	-	+	O	O	-	-	-	-	-
Sulphurous acid – aqueous	H ₂ SO ₃	-	+	+	+	+	+	+	+	+	-	+	O	+	-	-	-	+	-

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T																			
Table salt (sodium chloride) – aqueous	NaCl	+	+	+	+	+	+	+	+	+	+	+	+	+	-	O	-	O	O
Tall oil (colophonium) (liquid)		O	O	O		O	+		+	+	+	+			-	-	-	+	O
Tannic acid (tannin) – aqueous		+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	+	+
Tartaric acid – aqueous	C ₄ H ₆ O ₆	+	+	+	+	+	+	+	+	+	O	+	+	+	-	-	-	+	+
Tetrachloroethylene (perchloroethylene) – pure	Cl ₂ CCCl ₂	-	-	O	O	-	+	+	-	-	O	+	O	+	O	O	O	+	+
Tetraethyl lead (lead tetraethyl) – pure	Pb(CH ₂ CH ₃) ₄	O	O	+	+	O	+	+	+	+	+	+	+	+	O	O	+	+	+
Tetrahydrofuran – pure	C ₄ H ₈ O	-	-	-	+	-	+	+	-	-	+	-	O	+				+	+
Tetrahydronaphthalene (tetralin) – pure	C ₁₀ H ₁₂	-	-	+	+	-	+	+	-	-	+		O		+	+	+	+	+
Thiophene – pure	C ₄ H ₄ S	-	-	-	+	-	+		-	O					O	O	O	+	+
Tin chlorides – aqueous	SnCl ₂ , SnCl ₄	+	+	+	+	+	+	+	+	+	O	+	+	+	-	-	O	O	-
Toluene – pure	C ₆ H ₅ CH ₃	-	-	O	+	-	+	+	-	-	+	O	O	+	+	+	+	+	+
Town gas (grid gas, illuminating gas)		+	+	+	+	+	+	+	+	+	+	+			+	+	+	+	+
Tributyl phosphate – pure	(C ₄ H ₉ O) ₃ PO	-	-	-	O	-	+	+	-	-	-	+		+	+	+	-	+	+
Trichloroacetic acid – aqueous	Cl ₃ CCOOH	O	O	-	O	O	+	+	+	O	-	O	+		-	-	-	-	-
Trichloroethylene – pure	C ₂ HCl ₃	-	-	O	O	-	+	+	-	-	-	+	O	+	-	-	-	+	+
Trichloromethane (chloroform) – pure	CHCl ₃	-	-	O	+	-	+	O	-	-	-	+	O	+	+	+	+	-	+
Tricresylphosphate – pure	C ₂₁ H ₂₁ O ₄ P	-	-	-	+	-	+		-	O	+	-	+		O	O	O	+	+
Triethanolamine – pure	(CH ₂ CH ₂ OH) ₃ N	-	-	-	+	+	+	+	-	+	O	+			O	O	O	+	+
Trinitrophenol (picric acid) – pure	C ₆ H ₂ (OH)(NO ₂) ₃	O	-	O	+	-	+	+	-	+		+		+	+	+	+	+	+

Resistance in basic chemicals

Name	Formula	NBR	EPDM	FKM	FFKM	CR	PTFE	ETFE	PVC	PP	PA	PVDF	PPS	PEEK	MS	RG	GG, GS	1.4401/1.4571	1.4305/1.4105
U																			
Uranium hexafluoride – pure	UF ₆	+	+	+	O	+	+		+	+	-						-	+	O
Urea – aqueous	NH ₂ CONH ₂	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	O	O
Urotropin (hexamethylene tetramine) – aqueous	C ₆ H ₁₂ N ₄	+	+	+	+	+	+	+	+	+	+		O		O	O	O	+	+
V																			
Vinyl acetate – pure	CH ₂ CHOOCH ₂ CH ₃	+	+	+	+	+	+	+	-	+		O	+		O	O	O	+	+
Vinyl chloride – pure	CH ₂ CHCl	-	O	+	+	-	+	+	-	O	+	+	O		-	-	O	O	O
W																			
Water – distilled	H ₂ O	+	+	+	+	+	+	+	+	+	+	+	O	+	O	+	-	+	O
Water (seawater)	H ₂ O	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	O	O
Water vapour (130 °C)	H ₂ O	O	+	+ ⁵	+	O	+	+	-	-	-	+	O	+	O	+	+	+	+
White spirit (Shellsol D, turpentine substitute) – pure		O	-	O	+	O	+		O	O	+	+	+	+	+	+	+	+	+
Wood tar (impregnating oils)		-	-	-	+	-	+		O	-			+		+	+	O	+	+
X																			
Xenon – pure	Xe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Xylene – pure	C ₆ H ₄ (CH ₃) ₂	-	-	O	+	-	+	+	-	-	+	O	O	+	+	+	+	+	+
Y																			
Yeast – aqueous		+	+	+	+	+	+	+	+	+	+		+	O	O	O	O	+	+
Yellow prussiate of potash (Potassium ferrocyanide (II)) – aqueous	K ₄ [Fe(CN) ₆]	+	+	+	+	+	+		+	+	+	+		+	+	+	O	O	-

Name	Formula	NBR	EPDM	FKM	FFKM	CR	PTFE	ETFE	PVC	PP	PA	PVDF	PPS	PEEK	MS	RG	GG, GS	1.4401/1.4571	1.4305/1.4105
Z																			
Zinc chloride – aqueous	ZnCl ₂	+	+	+	+	+	+	+	+	+	-	+	+	+	-	-	-	O	-
Zinc sulphate – aqueous	ZnSO ₄	+	+	+	+	+	+	+	+	+		+	+	+	-	-	-	+	-

Resistance in commercial products

Name	NBR	EPDM	FKM	FFKM	CR	PTFE	ETFE	PVC	PP	PA	PVDF	PPS	PEEK	MS	RG	GG, GS	1.4401/1.4571	1.4305/1.4105
Commercial products																		
A																		
Acronal dispersions (polyacrylates)	-	+	+		+	+		-	+	O		+		O	O	O	+	+
Acronal solutions	-	O	-		-	+		-	O	O		+		O	O	O	+	+
Alkane sulfonic acid chlorides (mersoles)	+	O	+		+	+		+	O					O	O	O	O	O
Anise oil	O				-	+		-	-	+		O		+	+	O	+	+
Antifrogen-N	+	+	+		+	+		+	+	+		O		O	O	O	+	+
ASTM fuel A	O	-	O	+	O	+		+	O	+				+	+	+	+	+
ASTM fuel B	O	-	O	+	-	+		O	O	+				+	+	+	+	+
ASTM fuel C	O	-	O	+	-	+		O	O	+		+		+	+	+	+	+
ASTM oil IRM 901	+	-	+	+	+	+		+	O	+				+	+	+	+	+
ASTM oil IRM 902	O	-	+	+	+	+		+	O	+				+	+	+	+	+
ASTM oil IRM 903	O	-	O	+	+	+		+	O	+		+		+	+	+	+	+
ATE brake fluid (brake fluid)	-	+	-	+	O	+		O	O	+		+	+	O	O	+	+	+
B																		
Beeswax	+	+	+		+	+		+	+	-		+		+	+	O	+	+
Biodiesel (fatty acid methyl ester)	O	-	+	+	O	+	+	+	O	O	+	+	+	-	-	-	+	+
Bone oil	O	-	+	+	O	+		O	+	+		+		+	+	+	+	+
Brake fluid (ATE brake fluids)	-	+	-	+	O	+		O	O	+		+	+	O	O	+	+	+

Name	NBR	EPDM	FKM	FFKM	CR	PTFE	ETFE	PVC	PP	PA	PVDF	PPS	PEEK	MS	RG	GG, GS	1.4401/1.4571	1.4305/1.4105
C																		
Car antifreeze	O	+	+	+	+	+		+	+		+	O	+	+	O	+		
Cellulose lacquers	-	O	-	+	-	+		-	O	+		+		O	O	O	+	+
Chlophene (chlorodiphenyl)	+	O	+		-	+		-	+					+	+	O	+	+
Coconut oil	O	-	O	+	O	+	+	O	O	+	+	+	+	O	O	O	+	+
Cotton seed oil	O	-	+	+	O	+		+	-		+	+		+	+		+	+
Cutting oil (drilling oil)	O	-	O	+	O	+		+	O	O				+	+	+	+	+
Cyclanone (fatty alcohol sulfonate)	+	+	+		+	+		+	+	+						O	+	+
D																		
Desmodur T	-	-	+		-	+								+	+	+	+	+
Desmophen	+	+	+		+	+										+	+	+
Detergent (synth. laundry detergent)	O	+	O	+	+	+		+	O	O	+	+		O	O	O	+	+
Dextrin – aqueous	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Diesel oil – pure	O	-	+	+	-	+	+	O	O	+	+	+	+	+	+	+	+	+
Drilling oil (cutting oil)	O	-	O	+	O	+		+	O	O				+	+	+	+	+
Dyeworks wetting agent (Nekal BX)	+	+	+	O	+	+		+	+			O		O	O	O	+	+
E																		
Engine oils (machine oils, paraffin oils, mineral oils)	+	-	+	+	O	+	+	O	+	+	+	+	+	+	+	+	+	+
F																		
Fatty acid methyl ester (biodiesel)	O	-	+	+	O	+	+	+	O	O	+	+	+	-	-	-	+	+

Resistance in commercial products

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Fatty alcohol sulfonate (cyclanone)	+	+	+		+	+		+	+	+						O	+	+
Fatty oils (greases)	O	-	O	+	O	+	+	O	O	+	+	+	+	O	O	O	+	+
Fish liver oil	O	O	+	+	+	+		+	+			+		O	O	O	+	+
Fruit tree carbolineum	O	O	O	+	O	+		+	-	+		O		+	+	+	+	+
Fuel oils	O	-	+	+	O	+		O	O	+	+	+		+	+	+	+	+
G																		
Gelatine – aqueous	+	+	+	+	+	+		+	+	+	+		+	O	O	O	+	+
Greases (fatty oils)	O	-	O	+	O	+	+	O	O	+	+	+	+	O	O	O	+	+
H																		
Hair shampoo	O	O	O		O	+		+	O	+		+		O	O	O	+	+
Hydraulic fluid (Skydrol 500)	-	+	O	+	-	+		-		O		+	+	-	O	O	+	+
Hydraulic fluid (Skydrol 7000)	-	+	-	+	-	+		-		O				-	O	O	+	+
Hydraulic fluids – chlorinated hydrocarbons	-	O	+		-	+				+				-	O	O	+	
Hydraulic fluids – mineral oil based (H, H-L, H-LP)	O	-	O	+	O	+		+	+	+		+		+	+	+	+	+
Hydraulic fluids – phosphoric acid ester (HSD)	-	O	-	+	-	+		-	-	+		+		+	+	+	+	+
Hydraulic fluid – polyglykol water (HSC)	+	+	+	+	O	+		+	+	+				+	+	+	+	+
Hydraulic fluids – water in oil (HSB)	O	-	+	+	O	+		+	+	+		+		+	+	+	+	+
Hydraulic fluids – water-oil emulsions (HSA)	O	-	+	+	O	+		+	+	+		+		+	+	+	+	+
I																		
Impregnating oils (wood tar)	-	-	-	+	-	+		O	-			+		+	+	O	+	+

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Iodine tincture	O	O	O	O	O	+		-	O	-	+		O	O	O	O	O	O
L																		
Linseed oil	O	-	O	+	O	+		O	O	+	+	+	+	O	O	O	+	+
Lubricating oils	+	-	+	+	O	+	+	O	+	+	+	+	+	+	+	+	+	+
Lysol	-	-	O	+	-	+		O	O	-	O	+	+	+	+	+	O	O
M																		
Machine oils (paraffin oils, mineral oils, engine oils)	+	-	+	+	O	+	+	O	+	+	+	+	+	+	+	+	+	+
Mersoles (alkane sulfonic acid chlorides)	+	O	+		+	+		+	O					O	O	O	O	O
Mineral oils (paraffin oils, machine oils, engine oils)	+	-	+	+	O	+	+	O	+	+	+	+	+	+	+	+	+	+
Molasses (molasses-based flavour)	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	+	+
N																		
Nekal BX (dyeworks wetting agent) – aqueous	+	+	+	O	+	+		+	+			O		O	O	O	+	+
Nickel baths	+	+	+		+	+		+	+	+				-	-	-	+	O
P																		
Paraffin oils (machine oils, mineral oils, engine oils)	+	-	+	+	O	+	+	O	+	+	+	+	+	+	+	+	+	+
Petroleum – pure	+	-	+	+	O	+		+	+	+	+	+	+	+	+	+	+	+
Petroleum benzole spirit (premium grade petrol-ethanol mixture)	-	-	O	+	-	+	+	-	-	O		+	+	O	O	+	+	+
Photograph emulsions, developers, fixing baths	O	O	O	+	O	+		+	+		+	O						
Pine needle oil (spruce needle oil)	O	-	+	+	-	+		O	+			O		O	O		+	+
Polyacrylates (acronal dispersions)	-	+	+		+	+		-	+	O		+		O	O	O	+	+

Resistance in commercial products

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Premium grade petrol-ethanol mixture (petroleum benzole spirit)	-	-	O	+	-	+	+	-	-	O		+	+	O	O	+	+	+
S																		
Skydrol 500 (hydraulic fluid)	-	+	O	+	-	+				O		+	+	-	O	O	+	+
Skydrol 7000 (hydraulic fluid)	-	+	-	+	-	+				O				-	O	O	+	+
Soap solution – aqueous	O	O	O	+	O	+	+	O	O	O	+	+		O	+	O	+	+
Soda (sodium carbonate) – aqueous	+	+	+	+	O	+	+	+	+	+	O	+	+	O	O	O	+	+
Soluble glass (sodium silicates)	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	+	+	+
Spindle oils	+	-	+	+	O	+	+	O	+	+	+	+	+	+	+	+	+	+
Spruce needle oil	O	-	+	+	-	+		O	+			O		O	O		+	+
Synth. Laundry detergent (detergent)	O	+	O	+	+	+		+	O	O	+	+		O	O	O	+	+
T																		
Table salt (sodium chloride)	+	+	+	+	+	+	+	+	+	+	+	+	+	-	O	-	O	O
Transformer oil	+	-	+	+	O	+		O	O	+	+	+	+	+	+	+	+	+
Turpentine oil (pinene) – pure	O	-	O	+	-	+		O	-	+	+	+	+	O	O	+	+	+
Turpentine substitute (white spirit, Shellsol D) – pure	O	-	O	+	O	+		O	O	+	+	+	+	+	+	+	+	+
U																		
UV paint	-	+	-		-	+												
V																		
Varnishes	O	-	+	+	+	+		+	-	+		+		+	+	O	+	+
Vinegar 5% (grape vinegar)	-	+	O	O	-	+	+	O	+	O	+	+	+	-	O	O	O	+

Resistance in liquid foods and beverages

Name	NBR	EPDM	FKM	FFKM	CR	PTFE	ETFE	PVC	PP	PA	PVDF	PPS	PEEK	MS	RG	GG, GS	1.4401/1.4571	1.4305/1.4105
Foodstuff																		
A																		
Apple juice (apple sauce)						+		+	+	+			+	-			+	+
Apricot juice						+								+	+		+	+
B																		
Beer	+	+	+		+	+	+	+	+	+	+	+	+	+	+	-	+	+
Butter	+	+	+		+	+	+	+	+	+	+	+		-	-	-	+	+
Buttermilk	+	+	+		+	+	+	+	O	-		+		O	O	-	+	+
C																		
Cider	+	+	+			+		+	+	+	+	+				-	+	+
Corn oil	O	-	O	+	O	+	+	O	O	+	+	+	+	O	O	O	+	+
E																		
Edible oil	O	-	O	+	O	+	+	O	O	+	+	+	+	O	O	O	+	+
F																		
Fruit juices	O	O	O		O	+		O	O	O			+	-	-	-	+	+
Food fats and oils	O	-	O	+	O	+	+	O	O	+	+	+	+	O	O	O	+	+
G																		
Grape vinegar (vinegar 5%)	-	+	O	O	-	+	+	O	+	O	+	+	+	-	O	O	O	+
L																		
Lemon juice	O	+	+		+	+		+	+	+			+	O	O	-	+	O