

Structure and content of the chemical resistance charts

The following chemical resistance tables are divided into three categories. These are basic chemicals (chapter 2.2), liquid commercial products (chapter 2.3) and liquid food ingredients (chapter 2.4).

The resistance of these fluids is rated in detail for the elastomeric materials, plastics and metallic materials commonly used in Bürkert products. Rarely used materials such as CSM as well as aluminum are not described in the tables. Epoxy resin, which is commonly used in the construction of our products, but which is not mentioned, is resistant to most common chemicals.

Information regarding the chemical resistance of the unlisted materials is available on request, including chrome and nickel-plated parts.

Please see the overview in chapter 2.1 for additional information regarding general chemical resistance of seal and body materials. For the most commonly used chemical substances the chemical formula is added in the charts. The suffix "pure" means the technical pureness of the fluid, which in most cases exceeds 95% purity. As a rule, organic fluidic or gaseous media have this supplement. "Acetic acid - pure" means for example a 98% acetic acid. The suffix "aqueous" is mostly used for water miscible substances (such as Ethanol) but also for aqueous solutions of inorganic salts.

Due to the great number of possible concentrations, an average concentration is always assumed. Saturated aqueous solutions are described only if explicitly noted and the reference temperature for all statements is room temperature. At higher temperatures a reduced chemical resistance must be considered.

Interpretation of Symbols

- + material is not affected or is slightly affected by the chemical: suitable
- various attack level depending on prevailing conditions: limited suitability
- material exhibits severe attack: unsuitable

If materials are rated as "limited suitability", the time of impact has to be considered. At a long period of impact these materials can be heavily attacked or even destroyed. Therefore these parts are rated as wear parts and are not included in the standard warranty conditions.

In many cases it is not possible to make a clear statement due to different service conditions. In these cases the rating should also be "limited suitability".

References

All the information quoted in these resistance tables is based on industrial experience (for example "DECHEMA-Werkstoff-Tabelle", Germany or "DECHEMA Corrosion Handbook"), the data of our material and compound manufacturers and Bürkert's own stringent laboratory tests.

Chemical resistance properties gasket and housing materials

Overview

Material	Designation	General information on chemical resistance	Permissible temperatures		
			Neutral fluids long-term°C(°F)	Neutral fluids short-term°C(°F)	Aggressive fluids long-term°C(°F)
Gasket and diaphragm materials					
Ethylene propylene diene rubber	EPDM	Good resistance to ozone and weathering. Particularly suitable for aggressive chemicals. Unsatisfactory for oils and fats.	-30 (-22) to +130 (+266)		Dependant on aggressiveness of the fluid and on mechanical load.
Fluorine rubber	FKM	Chemical properties are superior to all other elastomers.	0 (+32) to +150 (+302)	0 (+32) to +200 (+392)	
Nitrile rubber	NBR	Fairly resistant to oil and petrol. Unsatisfactory with oxidising fluids.	-10 (+14) to +90 (+194)	-10 (+14) to +120 (+248)	
Chloroprene rubber	CR	The chemical properties are very similar to those of PVC and are between those of NBR and EPDM.	-10 (+14) to +100 (+212)	-10 (+14) to +110 (+230)	
Perfluorinated elastomers	FFKM	Similar to PTFE (dependent on blend)	+5 (+41) to +230 (+446)	+5 (+41) to +230 (446)	
Polytetrafluorethylene	PTFE	See plastic housing materials			

Material	Designation	General information on chemical resistance	Permissible temperatures		
			Neutral fluids long-term°C(°F)	Neutral fluids short-term°C(°F)	Aggressive fluids long-term°C(°F)
Housing materials - Metal					
Stainless steel	1.4401	Also applies for 1.4404, 1.4408, 1.4409	-20 (-4) to +400 (+752)		-20 (-4) to +150 (+302)
	1.4571	Also applies for 1.4581	-20 (-4) to +400 (+752)		-20 (-4) to +150 (+302)
	1.4305	Also applies for 1.4301, 1.4303	-20 (-4) to +400 (+752)		-20 (-4) to +150 (+302)
	1.4105	Also applies for 1.4113	-20 (-4) to +400 (+752)		-20 (-4) to +150 (+302)
Grey cast iron	GG	For neutral fluids	-20 (-4) to +180 (+356)		
Cast steel	GS	For neutral fluids	-20 (-4) to +400 (+752)		
Brass	MS	See individual resistance	-20 (-4) to +250 (+482)		
Red bronze	RG	See individual resistance	-20 (-4) to +250 (+482)		
Housing materials - Plastic					
Polyvinyl chlorid	PVC	Resistant to most acids, bases and salt solutions.	0 (+32) to +60 (+140)	0 (+32) to +60 (+140)	0 (+32) to +40 (+104)
Polypropylene	PP	Resistant to organic solvents as well as aqueous solutions of acids, bases and salts. Unsuitable for concentrated, oxidising acids	0 (+32) to +100 (+212)		0 (+32) to +60 (+140)
Polyamide	PA	Resistant to fats, oils, waxes, fuels, weak bases, aliphatic and aromatic hydrocarbons.	0 (+32) to +100 (+212)		0 (+32) to +60 (+140)
Ethylene tetrafluoroethylene copolymer	ETFE	Good resistance to many aggressive media (acids, aromatic hydrocarbons), not resistant against fuming nitric acid and sulphuric acid	-20 (-4) to +200 (+392)	-20 (-4) to +260 (+500)	-20 (-4) to +150(+302)
Polytetrafluor-ethylene	PTFE	Resistant to nearly all chemicals. Unsuitable for liquid sodium and fluorine compounds.	-20 (-4) to +200 (+392)	-20 (-4) to +260 (+500)	-20 (-4) to +150(+302)
Polyvinylidene-fluoride	PVDF	Unsuitable for hot solvents as well as for ketones, esters, and strong bases.	-20 (-4) to +100 (+212)		
Polyphenylene sulfide	PPS	Resistant to dilute mineral acids, bases, aliphatic and aromatic hydrocarbons, oils, fats, water, and to hydrolysis.	-40 (-40) to +200 (+392)	-40 (-40) to +260 (+500)	
Polyetherether-ketone	PEEK	Resistant to most chemicals. Unsuitable for concentrated sulfuric and nitric acid and certain chlorohydrocarbons.	-20 (-4) to +150 (+302)	-20 (-4) to +170 (+338)	

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
Chemicals																			
A																			
Acetaldehyde – aqueous	CH ₃ CHO	-	+	O	O	O	+	+	O	+	O	O	O	+	+	+	O	+	+
Acetaldehyde – pure	CH ₃ CHO	-	+	-	O	-	+	+	-	O	O	O	O	+	+	+	O	+	+
Acetic acid – pure	CH ₃ COOH	-	O	-	O	-	+	+	O	-	O	+	+	+	-	-	-	O	O
Acetic anhydride – pure	CH ₃ COOCOCH ₃	-	O	-	O	-	+	+	-	-	-	-	+	-	-	-	O	O	O
Acetoacetic ester (acid-free) – pure	CH ₃ COCH ₂ COOC ₂ H ₅	-	-	-	+	-	+	O	-	-	+	-	+	-	O	O	O	+	+
Acetone – pure	CH ₃ COCH ₃	-	+	-	+	-	+	+	-	O	+	-	+	+	+	+	+	+	+
Acetophenone – pure	C ₆ H ₅ COCH ₃	-	-	-	+	-	+	O	-	+	O	O	-	+	+	+	+	+	+
Acetylacetone – pure	CH ₃ COCH ₂ COCH ₃	-	-	-	+	-	+	-	-	+	-	-	-	-	-	-	O	+	+
Acetylchloride – pure	CH ₃ COCl	-	-	-	+	-	+	+	-	-	-	+	-	-	O	O	O	O	O
Acetylene – technical	HCCH	- ¹	+ ¹	- ¹	+ ¹	- ¹	+	+	O	O	+	+	+	+	+ ²	-	+	+	+
Acrylonitrile – pure	CH ₂ CHCN	-	-	-	+	-	+	+	-	+	O	O	+	+	+	+	+	+	+
Adipic acid – aqueous	HOOC(CH ₂) ₄ COOH	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Albumin – pure		+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	+	+
Allyl alcohol – pure	CH ₂ CHCH ₂ OH	+	+	O	+	O	+	+	-	+	+	+	+	+	+	+	+	+	+
Alum (potassium aluminium sulphate) – aqueous	KAl(SO ₄) ₂ x 12 H ₂ O	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+	O
Aluminium acetate – aqueous	Al(OOCCH ₃) ₃	O	+	+	+	+	+	+	O	+	+	+	+	+	O	O	-	+	+
Aluminium chloride – aqueous	AlCl ₃	+	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	O	O
Aluminium fluoride – aqueous	AlF ₃	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	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
Aluminium sulphate – aqueous	Al(SO ₄) ₃	+	+	+	+	+	+	+	+	+	O	+	+	+	-	-	-	O	O
Aminoacetic acid (glycine) – aqueous	NH ₂ CH ₂ COOH	O	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	+	+
Ammonia (gaseous) – pure	NH ₃	-	+	O	O	+	+	+	+	+	O	+	O	+	-	-	+	+	+
Ammonia (liquid) – pure	NH ₃	-	O ³	O	O	+	+	+	O	O	+	-	O	+	O	O	+	+	+
Ammonia water (ammonia solution, ammonium hydroxide)	NH ₄ OH	-	+	O	O	+	+	+	+	+	O	O	O	+	-	-	+	+	+
Ammonium acetate – aqueous	CH ₃ COONH ₄	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	+	+
Ammonium carbonate – aqueous	(NH ₄) ₂ CO ₃	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	O	+	+
Ammonium chloride – aqueous	NH ₄ Cl	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	O	O
Ammonium citrate – aqueous		+	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	+	+
Ammonium fluoride – aqueous	NH ₄ F	+	+	+	O	O	+	+	+	+	+	+	+	+	O	O	O	O	O
Ammonium fluosilicate – aqueous		+	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	+	+
Ammonium formate – aqueous	HNCOONH ₄	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	O	+	+
Ammonium hydroxide (ammonia solution, ammonia water) – aqueous	NH ₄ OH	-	+	O	O	+	+	+	+	+	O	O	O	+	-	-	+	+	+
Ammonium nitrate – aqueous	NH ₄ NO ₃	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	O	+	+
Ammonium oxalate – aqueous	NH ₄ OOC ₂ COONH ₄	+	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	+	+
Ammonium persulphate – aqueous	(NH ₄) ₂ S ₂ O ₈	-	+	+	+	O	+	+	O	+	-	+	+	+	O	O	-	O	O
Ammonium phosphate – aqueous	(NH ₄) ₂ HPO ₄	+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	+	+	+
Ammonium sulphate – aqueous	(NH ₄) ₂ SO ₄	+	+	+	+	+	+	+	+	+	O	+	+	+	-	-	O	O	O
Ammonium sulphide – aqueous	(NH ₄) ₂ S	+	+	O	+	+	+	+	+	+	+	+	+	+	-	-	O	+	+
Ammonium sulphite – aqueous	(NH ₄) ₂ SO ₃	+	+	+	+	+	+	+	O	+	+	+	+	+	-	-	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
Ammonium thiocyanate – aqueous	NH ₄ NCS	+	+	+		+	+	+	+	+	+				-	-	O	+	+
Amyl acetate – pure	CH ₃ COO(CH ₂) ₄ CH ₃	-	O	-	+	-	+	+	-	O	+	+	+	+	+	+	O	+	+
Amyl alcohol – pure	H ₃ C(CH ₂) ₄ OH	+	O	+	+	+	+	+	+	+	+	+	+	+	+	+	O	+	+
Aniline hydrochloride – aqueous	C ₆ H ₅ NH ₃ Cl	O	+	O ⁵	+	O	+	O	O	O	-	+			-	-	-	-	-
Aniline – pure	C ₆ H ₅ NH ₂	-	O	O	+	-	+	+	-	O	-	+	O	+	-	-	O	+	+
Anisole (methoxybenzene) – pure	C ₆ H ₅ OCH ₃	O	O	-	+	-	+		-	-	+		+		+	+	+	+	+
Anone (cyclohexanone) – pure	C ₆ H ₁₀ O	-	-	-	+	-	+	+	-	-	+	O	+	+	O	O	O	+	+
Anthracene oil – pure		-	-	-	+	-	+		-	-	+				+	+	+	+	+
Anthraquinone sulphonic acid – aqueous	C ₆ H ₄ COCOC ₆ H ₄ SO ₃ H	O	+	+	+	+	+	O	+	+	O				O	O	O	O	O
Antimony chloride – aqueous	SbCl ₃	O	+	+ ⁵	+	+	+		+	+	-	+	+	+	O	O	O	-	-
Aqua regia	HNO ₃ + HCl	-	-	-	+	-	+	O	O	-	-	-	-	-	-	-	-	-	-
Arabic acid – aqueous		+	+	+	+	+	+		+	+					-	-	-	+	+
Argon – pure	Ar	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Arsenic acid – aqueous	H ₃ AsO ₄	+	+	+	+	+	+	O	+	+	O	+			-	O	-	+	+
Arsenic trichloride – aqueous	AsCl ₃	+	+	+	+	+	+		+	+	-				-	-	O	O	O
Arsenious acid – aqueous	H ₃ AsO ₃	+	+	+	+	+	+		+	+					O	O	-	+	+
Arylsilicate – aqueous		O	O	O	+	O	+								+	+	+	+	+
Ascorbic acid – aqueous	C ₆ H ₈ O ₆	+	+	+	+	+	+		+	+			+		-	-	-		
Aspartic acid – aqueous	HOOCCHNH ₂ CH ₂ -COOH	+	+	+	+	+	+		+	+	+		+		-	-	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
B																			
Barium chlorate – aqueous	Ba(ClO ₃) ₂	+	+	+	+	+	+		+	+	-		+		+	+	O	+	+
Barium chloride – aqueous	BaCl ₂	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	O	+	O
Barium hydroxide – aqueous	Ba(OH) ₂	+	+	+	+	+	+	+	+	+	O	+	+		+	+	+	+	+
Barium sulphide and polysulfide – aqueous	BaS	+	+	+	+	+	+	+	+	+	-	+	+	+	O	O	O	+	+
Battery acid (sulphuric acid 20%)	H ₂ SO ₄	O	+	+	+	O	+	+	+	+	-	+	+	O	-	-	-	+	O
Benzaldehyde – aqueous	C ₆ H ₅ CHO	O	+	+	+	-	+	+	-	+	O	O	O	+	O	O	-	+	
Benzene – pure	C ₆ H ₆	-	-	-	+	-	+	O	-	-	+	O	O	+	O	O	O	+	+
Benzenesulfonic acid – aqueous	C ₆ H ₅ SO ₃ H	+	+	+	+	+	+	+	+	+		+	+	-	O	O	O	+	+
Benzidine sulphonic acids – aqueous	NH ₂ C ₆ H ₄ C ₆ H ₃ -SO ₃ NH ₂	+	+	+	+	+	+		+	+	+				+	+	+	+	+
Benzine (heptane, hexane) – pure		+	-	+	+	+	+	+	+	O	+	+	+	+	+	+	+	+	+
Benzoic acid – aqueous	C ₆ H ₅ COOH	+	+	+	+	+	+	+	+	+	-	+		+	O	O	O	+	+
Benzyl alcohol – pure	C ₆ H ₅ CH ₂ OH	-	+	O	+	O	+	+		+	O	+		+	+	+	O	+	+
Bergamot oil		-	-	-		-	+		-	-	-		+		O	O	O	+	+
Bisulphite (sodium bisulphite, sodium hydrogen sulphide) – aqueous	NaHSO ₃	O	+	+	+	+	+	+	+	+	O	+	+	+	O	O	-	+	O
Borax – aqueous	N ₂ B ₄ O ₇	+	+	+	+	+	+	+	+	+	+	+	+	+	+	O	+	+	+
Boron hydrofluoric acid (fluoroboric acid) – pure	HBF ₄	+	+	+	O	+	+	+	+	+	-	+	+		-	-	-	-	-
Boric acid – aqueous	H ₃ BO ₃	+	+	+	+	+	+	+	+	+	-	+		O	O	O	O	O	O
Brine (cooling brine)		+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	-	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
Bromine (liquid) – pure	Br ₂	-	-	-	+	-	+	0	0	-	-	+	-	-	-	0	0	0	0
Butadiene – pure	CH ₂ (CH) ₂ CH ₂	0	0	0	+	+	+	+	+	+	+	+	+	+	+	0	0	+	+
Butane (gaseous and liquid) – pure	C ₄ H ₁₀	+	-	+	+	+	+	+	0	0	+	+	+	+	0	0	0	+	+
Butanediol – aqueous (10%)	HO(CH ₂) ₄ OH	+	+	0	0	0	+	+	0	0	+	+	+	+	+	+	+	+	+
Butanol (butyl alcohol) – pure	CH ₃ (CH ₂) ₃ OH	0	+	+	+	0	+	+	0	+	+	+	+	+	+	+	0	+	+
Butoxyl (methoxybutyl acetate) – pure	CH ₃ OC ₄ H ₉ O ₂ CCH ₃	+	0	0		+	+		-	+					0	0	0	+	+
Butyl acetate – pure	CH ₃ (CH ₂) ₃ O ₂ CCH ₃	-	+	-	+	-	+	0	-	-	+	+	+	+	0	+	0	+	+
Butyl alcohol (butanol) – pure	CH ₃ (CH ₂) ₃ OH	0	+	+	+	0	+	+	0	+	+	+	+	+	+	+	0	+	+
Butylbenzyl phthalate – aqueous		-	-	-	+	-	+		-	0	+		0		+	+	+	+	+
Butylene (liquid) – pure	H ₃ CCH ₂ CHCH ₂	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+
Butyl phthalate – pure	C ₆ H ₄ (CO) ₂ (O(CH ₂) ₃ CH ₃) ₂	-	-	-	+	-	+		-	0	+		+	+	+	+	0	+	+
Butynediol – pure	HOCH ₂ C ₂ CH ₂ OH	0	0	0		0	+		0	+	+		+	+	+	+	+	0	+
Butyric acid – aqueous	H ₃ C(CH ₂) ₂ COOH	0	0	0	0	0	+	+	0	-	0	+	+	+	0	0	-	+	0
C																			
Calcium chloride – aqueous	CaCl ₂	+	+	+	+	+	+	+	0	+	0	+	+	+	-	-	0	0	0
Calciumhydrogensulphite – aqueous	Ca(HSO ₃) ₂	+	+	+	+	+	+	+	+	-		+	+	-	-	-	-	+	0
Calcium hydroxide (lime water) – aqueous	Ca(OH) ₂	+	+	+	+	+	+	+	+	0	0	+	+	-	-	-	-	+	+
Calcium hypochlorite (chlorinated lime) – aqueous	Ca(OCl) ₂	-	+	0	+	0	+	+	0	+	-	+	+	-	-	0	0	0	0
Calcium nitrate – aqueous	Ca(NO ₃) ₂	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	0	0	0
Carbitol (2-(2-ethoxyethoxy)ethanol) – pure	CH ₃ CH ₂ O(CH ₂) ₂ -O(CH ₂) ₂ OH	0	0	0	+	0	+	+	+		+		+		+	+	+	+	+

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
Carbolineum (creosote) – pure		0	0	0	+	0	+		+	-	+				+	+	+	+	+
Carbolic acid (phenol, hydroxybenzene) – aqueous	C ₆ H ₅ OH	0	0	0	+	0	+	+	+	+	-	+	+	0	0	0	0	+	+
Carbon dioxide (dry) – pure	CO ₂	+	0	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+
Carbon dioxide (humid)	CO ₂	+	0	0	+	0	+	+	0	0	0	+	+	+	0	0	0	+	+
Carbon disulphide – pure	CS ₂	-	-	+	+	-	+	+	-	+	0	+	+		-	-	-	+	0
Carbonic acid – aqueous	H ₂ CO ₃	+	+	+	+	+	+	+	0	+	0	+	+	+	0	0	0	+	+
Carbonyl chloride (phosgene) [liquid] – pure	COCl ₂		-	0	+	-	+		0	0	0				+	+	+	+	+
Carbonyl chloride (phosgene) [gaseous] – pure	COCl ₂		-	+	+	-	+	+	+	-	0	+			+	+	+	+	+
Carbon monoxide – pure	CO	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Carbon tetrachloride – pure	CCl ₄	-	-	+	0	-	+	+	-	-	+	+	0	+	0	0	-	+	+
Caustic potash (potassium hydroxide) – aqueous	KOH	-	+	-	+	0	+	+	+	+	0	0	0	+	-	-	0	+	+
Cellosolve (glycol ethyl ether) – pure	HO(CH ₂) ₂ OCH ₂ CH ₃	-	-	-	+	-	+	+	-	-	+	+	+		+	+	+	+	+
Champhor oil – pure		+	-	+	0	-	+		+	-			0		0	0	0	+	+
Chloral hydrate (chloral) – aqueous	CCl ₃ CH(OH) ₂	-	0	0	+	-	+	+	-	-	-	-	0		0	0	0	0	0
Chloric acid – aqueous	HClO ₃	-	0	-	+	-	+		+	-	-	+			-	-	-	-	-
Chlorinated lime (calcium hypochlorite) – aqueous	Ca(OCl) ₂	-	+	0	+	0	+	+	0	+	-	+	+	+	-	-	0	0	0
Chlorine bleaching lye (sodium hypochlorite) – aqueous	NaOCl	-	0	0	+	-	+	+	+	0	-	0	-	+	0	0	0	0	0
Chlorine dioxide – aqueous	ClO ₂	-	-	0	+	-	+	+	+	0	-	0			-	-	0	0	0
Chlorine (gaseous and dry)	Cl ₂	-	-	0	+	0	+	+	0	-	-	+	-	+	-	-	0	0	0
Chlorine (gaseous and humid)	Cl ₂	-	-	0	0	-	+	+	0	-	-	0	-	-	-	-	-	-	-

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
Chlorine (liquid) – pure	Cl ₂	-	-	O	+	-	+	+	-	-	-	+	-	-	-	-	-	+	+
Chlorine water (humid)	Cl ₂	-	-	O	O	-	+	+	+	-	-	O	-	-	-	-	-	-	-
Chloroacetic acid – aqueous	ClCH ₂ COOH	-	O	-	+	-	+	+	O	-	-	+	+	+	O	-	O	O	-
Chlorobenzene – pure	C ₆ H ₅ Cl	-	-	-	+	-	+	+	-	-	+	+	-	+	+	+	+	+	+
Chloroethanol (ethylene chlorohydrine) – pure	ClCH ₂ CH ₂ OH	-	-	O	+	-	+	+	-	+	O	+	O	O	+	+	+	+	+
Chlorofluorocarbons (frigenes)							+				+	O	O	+					
Chloroform (trichloromethane) – pure	CHCl ₃	-	-	O	+	-	+	O	-	-	-	+	O	+	+	+	-	+	+
Chloromethane (methyl chloride) – pure	CH ₃ Cl	-	-	O	+	-	+	+	-	-	+	+	O	+	O	O	O	+	+
Chloronaphthalone – pure	C ₁₀ H ₇ Cl	-	-	O	+	-	+		-	-	+		O		+	+	+	+	+
Chlorophenole – pure	C ₆ H ₄ OHCl	-	-	-	+	-	+	+	O				O		+	+	O	+	+
Chlorophenoxyacetic acid – aqueous	ClC ₆ H ₄ OCHOOH	+	+	+		+	+		+	+							O	+	+
Chlorosulfonic acid – pure	ClSO ₃ H	-	-	-	+	-	+	O	O	-	-	O	-	-	O	O	O	O	O
Chloroxyleneol (4-Chloro-3,5-dimethylphenol) – pure	C ₆ H ₂ OH(CH ₃) ₂ Cl	-	-	-	+	-	+		O						+	+	O	+	+
Choline chloride – aqueous	[HOCH ₂ CH ₂ N(CH ₃) ₃]Cl	+	+	+		+	+		O	O					-	-	O		
Chrome alum (chromium(III) – potassium sulphate) – aqueous	KCr(SO ₄) ₂ x 12 H ₂ O	+	+	+	+	+	+		O	+	O	+			O	O	-	O	O
Chromic acid – aqueous	H ₂ CrO ₄	-	O	+	+	O	+	O	+	O	-	+	-	O	-	-	O	O	O
Chromium sulphate – aqueous	Cr ₂ (SO ₄) ₃	+	+	+	+	+	+		+	+	O		+		O	O	-	O	O
Citral (citronella oil) – pure		-	-	-		-	+			-	+		+		+	+	O	+	+
Citric acid – aqueous	C ₆ H ₈ O ₇	+	+	+	+	+	+	+	+	+	+	+	+	+	O	+	-	+	O
Colophonium (tall oil) (liquid)		O	O	O		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
Cooling brine (brine)		+	+	+	+	+	+	+	+	+	+	+	+	+	O	O	-	O	O
Copper acetate – aqueous	Cu(CH ₃ COO) ₂	O	+	+	+	+	+		+	+	O	+	+	+	O	-	O	+	+
Copper chloride – aqueous	CuCl ₂	+	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	-	-
Copper sulphate – aqueous	CuSO ₄	+	+	+	+	+	+	+	+	+	O	+	+	+	O	O	O	O	O
Creosote (carbolineum) – pure		O	O	O	+	O	+		+	-	+				+	+	+	+	+
Cresol – aqueous	C ₆ H ₄ (OH)(CH ₃)	-	-	O	+	-	+	+	O	O	-	O	+	+	+	+	+	O	O
Cyclohexane – pure	C ₆ H ₁₂	-	-	O	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+
Cyclohexanol – pure	C ₆ H ₁₁ OH	-	-	+	+	+	+	+	O	+	+	+	+	+	+	+	+	+	+
Cyclohexanone (anone) – pure	C ₆ H ₁₀ O	-	-	-	+	-	+	+	-	-	+	O	+	+	O	O	O	+	+
Cymene – pure	C ₆ H ₄ (CH ₃)[CH(CH ₃) ₂]	-	-	-		-	+		-	-	+		O		+	+	+	+	+
D																			
Decahydronaphthalene (decalin) – pure	C ₁₀ H ₁₈	-	-	+	+	-	+	+	+	O	+		O		+	+	+	+	+
Dextrose (glycose) – aqueous	C ₆ H ₁₂ O ₆	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Diacetone alcohol (anhydrous) – pure	(CH ₃) ₂ COHCH ₂ COCH ₃	-	+	-	+	O	+	+			O	+			O	+	O	+	+
Dibutyl phthalate – pure	C ₆ H ₄ (COOC ₄ H ₉) ₂	-	O	-	+	-	+	+	O	O	+	-	+		+	+	+	+	+
Dibutyl sebacate (DBS) – pure	(C ₄ H ₉ COO)(CH ₂) ₈ (OOC ₄ H ₉)	-	O	-	+	-	+		-	+	+	-	+		+	+	+	+	+
Dichloroethane (ethylene chloride) – pure	ClCH ₂ CH ₂ Cl	-	-	-	+	-	+	+	-	-	+	+	O	+	-	-	-	+	-
Dichloroethene – pure	Cl ₂ CHCH ₃	-	-	O	+	-	+	+	-	-	+	+	O	+	+	+	O	+	+
Dichloromethane (methylene chloride) – pure	CH ₂ Cl ₂	-	-	O	+	-	+	+	-	-	-	-	O	O	+	+	-	+	+
Dicyclohexylammonium nitrate – pure	[(C ₆ H ₁₁) ₂ NH ₂]NO ₂	+	+	+	+	+	+								O	O	O	+	+