

STÜBBE GmbH & Co. KG

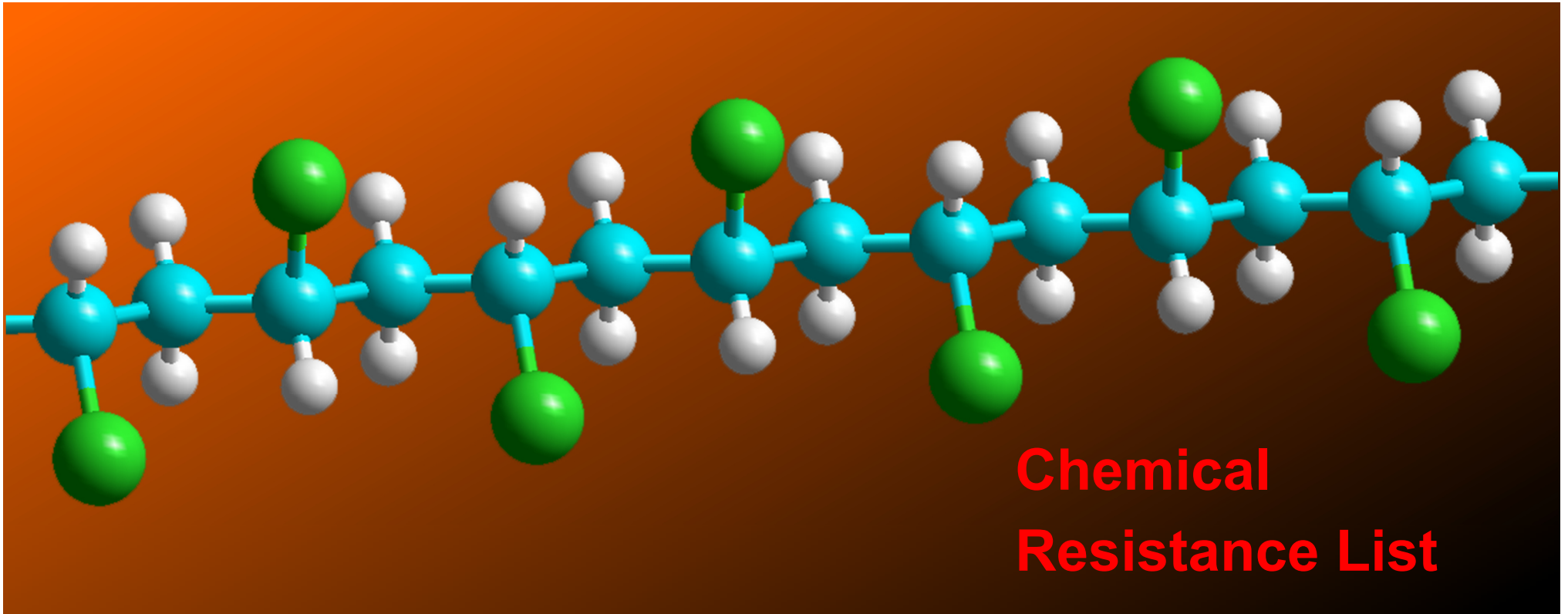
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This document is only intended as an orientation aid for material selection and is not binding. No guarantee can be given that the resistance indicated here generally applies to each individual application. Moreover, this document does not give an assurance of particular material properties.

General Information on the Chemical Resistance of Materials

Plastics are ideal materials for the construction of pipework and are often superior to metals with regard to their material properties and costs. However, it is important to select the materials carefully in order to avoid material failure that can lead to costs and present a safety risk, in particular, in the case of aggressive media. As pressure/temperature curves are generally determined for the medium water, additional consideration should be given to the chemical resistance at the operating temperature of the application. This resistance list listing the chemical resistance of the thermoplastics, elastomers and bearing materials contained in our product range to a large number of media, is intended as a decision-making aid for selecting the materials. The degree of chemical resistance is classified in our list as follows:

+ = „resistant“:

The material is generally assessed as suitable.

0 = „conditionally resistant“:

The material is subject to attack by the medium. However, the material may be used under certain limited conditions. It is advisable to carry out more extensive tests.

- = „non-resistant“:

The material is generally assessed as unsuitable.

not specified:

The material has not been tested with the medium at the specified temperature.

The resistance of materials to mixtures of chemicals may differ from their resistance to the pure media. Discolorations which are caused by some media, but have no effect on the physical properties of the materials, are not included in this list.

The question regarding the chemical resistance of a material with the specification “resistant”, “conditionally resistant” or “non-resistant” seems simple at first glance. However, answering this question involves the consideration of complicated interrelations that have not yet been completely clarified to date. That does not mean that plastics engineers do not have access to a large number of reliable values with regard to the resistance of plastics and cannot make good predictions on the resistance. However, it does mean that there is always a certain element of uncertainty.

This resistance guide is based on our own laboratory trials and our practical experience over the years.

However, the resistance specifications cannot be applied to all possible operating conditions without taking further factors into consideration.

For example, a general resistance list can hardly take the phenomenon of stress crack corrosion for each application into consideration. Furthermore, the type and amount of additives such as plasticizers, fillers and stabilizers have a considerable influence on the resistance of materials. This applies particularly to elastomers, whose properties are determined not only by the base material but also by the other recipe ingredients and the curing parameters. In the case of thermoplastic materials such as PVC, the type and proportion of the impact resistance modifier can lead to different degrees of resistance. This occurs especially in cases of highly concentrated contact fluids and can often only be detected with regard to long-term behaviour.

In addition to the chemical resistance of the materials used, the constructional details also influence the suitability of the finished product. PTFE, for example, is resistant to virtually all media, even at higher temperatures. Nevertheless, some media, particularly at higher pressures, are able to diffuse through PTFE layers (Permeation, see below). This must be taken into consideration for PTFE coated elastomer diaphragms.

Therefore, the resistance list cannot replace conducting your own practical tests.

Controlled individual tests must be performed on safety components subject to high stress, in particular, to reliably prove their suitability. Creep tests conducted for at least thousand hours or comparison of short-term tensile strength before and after the preselected chemical contact at the respective necessary temperature are suitable methods for determining suitability.

Permeation

In the case of thin-walled components made of plastics or elastomers, the permeability of media through materials should also be included in the product selection. The service life of wearing parts such as diaphragms can be reduced by permeation. The extent of permeation depends on the material, the passing substances and their concentrations, the operating pressure, the operating temperature and also the dynamic-mechanical stress.

Media, from which permeation problems might occur depending on the exact operating parameters, are marked with the abbreviation "P". Examples are hydrofluoric acid, nitric acid and hydrochloric acid.

For some products with relatively thin PTFE-coated elastomer diaphragms (i.e. diaphragm pressure gauge guard MDM 902), we offer product variants with

an additional permeation-protection foil (PFA or ECTFE). These additional options are recommended for permeation-active, aggressive substances in higher concentrations or at higher temperatures. In case of doubt, we ask for consultation with stating the exact operating conditions.

Structure and Usage of this List

This is followed on the next pages:

- properties of selected materials
- list of media
- list of chemical resistances

Since different, synonymous names are common for many media, the STÜBBE resistance list is sorted by four-digit media numbers, which can be found in the list of media. Mixed acids are precisely defined in our resistance list by the mass content (percentage) of acids related to the whole mixture. Within a name the acid components are sorted by decreasing mass content.

Concentration figures in % are mass contents (g substance contained in 100 g solution), unless stated otherwise.

Notes on Hazardous Substances

The majority of media listed here are hazardous substances. Safety-relevant information can be taken from safety data sheets for the substances. Of course,

the specific hazards and associated risks of individual media also depend on the concentration and the operating temperature.

Especially with hazardous substances, it is very important to check not only the chemical resistance but also the optimal technical suitability of a product for the respective application.

For example, most STÜBBE products are designed exclusively for the conveyance of liquids and, with a few exceptions, are not suitable for gases. For flammable and at the same time often non-conducting flow media it has to be considered, that plastics are non-conductors and are generally only of limited suitability in potentially explosive atmospheres.

An assessment of materials as resistant does not exempt plant operators from the obligation to comply with national or regional safety regulations and the resulting protective measures and to take these into account when selecting products.

Legal Notes

This resistance list is an excerpt from a STÜBBE database, which is subject to continuous data maintenance. It is compiled to the best of our knowledge and based on our experience and our current knowledge. Publication of this list or excerpts there of are not permitted without the prior express permission of STÜBBE. In the event of a violation of this copyright we reserve the right to take legal action.

This table only gives a simplified general overview. The product specific application limits stated in our data sheets must be kept in.

Material	Properties	Temperature	
		min.	max.
polyvinyl chloride PVC-U, rigid PVC (non-plasticized)	Hard, rigid thermoplastic. Thermally less stressable. The material itself is notch impact sensitive, types with enhanced impact strength show good mechanical properties. Generally good resistance against aqueous media (salts, acids, lyes) and aliphatic hydrocarbons. Non-resistant to aromatic hydrocarbons, chlorinated hydrocarbons, ketones, ester and ether. Good weathering resistance when stabilized.	0°C	+60°C
polyethylene, high density PE-HD, PE 80/100, PE 1000 high molecular low pressure polyethylene	Tenacious, flexible to rigid depending on the crystallinity. Excellent electrical properties. Generally good resistance against aqueous media (salts, acids, lyes), many polar organic substances (alcohols, ketones, ester, organic acids) various oils and greases. Non-resistant to concentrated oxidizing acids, aromatic hydrocarbons, chlorinated hydrocarbons. Good weathering resistance when stabilized.	−20°C	+80°C
polypropylene PP-H (homopolymer)	Higher hardness and rigidity in comparison to PE, but poor tenacity in the cold. Therefore, the material below +5°C becomes brittle. Higher service temperature than PE. Very good electrical properties. Apart from that similar resistance as PE-HD, but higher tendency to stress-cracking corrosion by oxidizing media and lower UV resistance.	+5°C	+100°C
polypropylene PP-GF30 (homopolymer, reinforced with 30% glass fibres)	The glass fibre reinforcement leads to a higher rigidity but unfortunately also to a reduced chemical resistance against certain media (i.e. hydrofluoric acid, hydrochloric acid, lyes). Other characteristics are similar to non-reinforced PP-H.	0°C	+110°C
polyvinylidene difluoride PVDF (homopolymer)	Tenacious, rigid thermoplastic containing fluorine, with excellent mechanical, physical and thermal properties and excellent weathering resistance. Resistant to inorganic acids (also oxidizing), aliphatic and aromatic hydrocarbons, chlorine and bromine. Less resistant to alkaline solutions (danger of stress-cracking corrosion).	−30°C	+145°C
polytetrafluoroethylene PTFE (unfilled)	Low pressure resistance, high creep tendency, low long-time steadiness. Resistant to almost all chemicals. Very good weathering resistance. Physiologically safe.	−270°C	+260°C

Material	Properties	Temperature	
		min.	max.
tetrafluoroethylene-hexafluoropropylene-copolymer FEP	Chemical resistance similar PTFE, but higher strength, lower creep tendency, transparent and diffusion-tight due to thermoplastic processability. Physiologically safe.	–200°C	+200°C
tetrafluoroethylene-perfluoroalkoxyvinylether-copolymer PFA	Chemical resistance similar PTFE, but higher strength, lower creep tendency, transparent and diffusion-tight due to thermoplastic processability. Physiologically safe.	–200°C	+260°C
polyamide PA12	Very good tenacity, high deformation resistance in the hot. Tenacious in the cold. Good abrasion strength, transparent. Generally good resistance to neutral aqueous media and aliphatic hydrocarbons. Non-resistant to acids, concentrated alkaline solutions and phenols. Weathering resistance: For outside application a protective coating is recommended.	–20°C	+100°C
polysulfone PSU	Good heat distortion resistance and hydrolytic stability. Well balanced, mechanical properties. Sensitive to stress-cracking corrosion. Transparent. Generally good resistance to aqueous media (salts, diluted acids, lyes) and aliphatic hydrocarbons. Non-resistant to ketones, esters, ethers, chlorinated and aromatic hydrocarbons. Weathering resistance: For outside application a protective coating is recommended.	–15°C	+160°C
polyetheretherketone PEEK	High-performance thermoplastic with outstanding thermal-mechanical properties. Chemical resistance similar to PP.	–50°C	+250°C
hard rubber coating HG1	Hard rubber coating based on NR/SBR/graphite (used for vertical pump suspension tubes). Moderate thermal-mechanical properties and chemical resistance. Good abrasion resistance.	0°C	+100°C
ethylene-propylene-diene-rubber EPDM	Average mechanical properties, not oil-resistant. Resistant to hot water, steam, aqueous media (salts, diluted acids, lyes) and many polar organic substances. Non-resistant to greases, oils, aliphatic, aromatic and halogenated hydrocarbons and fuels.	–40°C	+150°C

Material	Properties	Temperature	
		min.	max.
acrylonitrile-butadiene-rubber NBR	Average mechanical properties, oil-resistant. Resistant to aliphatic hydrocarbons and fuels. Non-resistant to acids, concentrated lyes and oxidizing media. Low ozone and weathering resistance.	–25°C	+120°C
fluoro-rubber FKM (= FPM)	Standard FKM quality. Moderate mechanical properties, good back force capability at higher temperatures, oil-resistant. Low cold flexibility. Good resistance to various acids and salt solutions, aliphatic hydrocarbons and oxidizing media. Only moderately resistant to lyes. Non-resistant to esters, ketones and amines. Excellent weathering resistance.	–10°C	+200°C
fluoro-rubber FKM+	Higher quality FKM. Technical properties are similar to standard FKM, but clearly superior chemical resistance to more concentrated acids and various other media in this resistance list. <i>It should be noted that FKM+ is not included in all STÜBBE products and products with FKM+ are labeled accordingly. If in doubt, we ask for consultation.</i>	–10°C	+200°C
perfluoro-rubber FFKM	Mechanical properties are similar to those of FKM, but thermally more stressable. Best chemical resistance of all mentioned rubber types. Excellent weathering resistance.	–10°C	+260°C
carbon	Synthetic resin bounded carbon. Good slip properties (used for bearings and bushes). Good thermal resistance. The chemical resistance is generally good, but in cases of strong, concentrated acids and oxidizing media reduced due to the carbon and/or synthetic resin.		approx. +200°C
silicon carbide (pressureless sintered) SSiC	For slip bearings and bushes used ceramic high performance material. High thermal and very universal chemical resistance.		approx. +1500°C

Material	Properties	Temperature	
		min.	max.
Al ₂ O ₃	Oxide ceramics on the bases of aluminium oxide (used for bearings and axes). Excellent resistance against most organic substances (especially hydrocarbons and solvents), various inorganic acids, aqueous and oxidizing media. Non-resistant to lyes at higher temperatures. Unsuitable for hydrofluoric acid.		approx. +1900°C
Al ₂ O ₃ Sensor	Aluminium oxide ceramics based sensors of product groups HFT und PTM. Resistance similar Al ₂ O ₃ , but with limitations due to the electronics embedded in the ceramic matrix.	–25°C	+125°C
ZrO ₂	Oxide ceramics on the bases of zirconium(IV) oxide (zirconia). Excellent resistance against most organic substances (especially hydrocarbons and solvents), various inorganic acids, aqueous and oxidizing media and lyes. Unsuitable for hydrofluoric acid.		+900°C
V2A (alloy 1.4301)	Stainless, austenitic chrom-nickel steel with good corrosion resistance.		approx. +700°C
V4A (alloy 1.4571)	Stainless, austenitic chrom-nickel steel, improved corrosion resistance in comparison to 1.4301.		approx. +700°C
Hastelloy C (alloy 2.4537)	High temperature alloy on the basis of nickel, chromium and molybdenum. Very corrosion resistant to moist chlorine, aqueous solutions of chlorine, chlorides and hypochlorites, sulfuric acid, phosphoric acid, acetic acid and formic acid.		approx. +1000°C

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acetaldehyde	1014
acetamide	1015
acetanilide	1017
acetic acid	1310
acetic acid amide	1015
acetic acid amyl ester	1078
acetic acid anilide	1017
acetic acid butyl ester	1160
acetic acid ethyl ester	1317
acetic acid methyl ester	1481
acetic acid potassium salt	1386
acetic acid sodium salt	1509
acetic acid vinyl ester	1695
acetic anhydride	1016
acetone	1018
acetonitrile	1020
acetophenone	1021
acetylacetone	1022
acetylbenzene	1021
acetyl chloride	1023
acetylene	1024
acetylene tetrachloride	1670
2-acetyloxybenzoic acid	1025
acetylsalicylic acid	1025
O-acetylsalicylic acid	1025
acrylic acid butyl ester	1028
acrylic acid ethyl ester	1318

acrylonitrile	1027
adipic acid	1029
air	1461
alkanesulfonic acids (mixtures)	1031
alkyl sulfates	1332
allyl alcohol	1032
allyl chloride	1033
alum	1030
alumina	1044
aluminium acetate basic	1034
aluminium ammonium sulfate	1035
aluminium chlorate	1036
aluminium chloride	1037
aluminium fluoride	1040
aluminium fluorosilicate	1041
aluminium hydroxide	1042
aluminium iron(II) sulfate	1039
aluminium nitrate	1043
aluminium oxide	1044
aluminium sulfate	1045
aluminium trifluoride	1040
amidosulfuric acid	1657
aminoacetic acid	1051
amino acids	1052
p-aminoazobenzene	1048
aminobenzene	1083
4-aminobenzenesulfonic acid	1050

4-aminobenzoic acid	1049
1-aminobutane	1161
aminocarboxylic acids	1052
aminocyclohexane	1250
2-aminoethanol	1313
2-aminoglutaric acid	1358
(R)-2-amino-3-mercaptopropionic acid	1253
aminomethane	1482
aminosulfuric acid	1657
ammonia, aqueous solution	1054
ammonia, gaseous	1053
ammonium acetate	1056
ammonium alum	1035
ammonium aluminium sulfate	1035
ammonium benzoate	1057
ammonium bicarbonate	1066
ammonium bisulfate	1067
ammonium bisulfide	1068
ammonium bromide	1058
ammonium carbonate	1059
ammonium chloride	1060
ammonium citrate	1061
ammonium dichromate	1062
ammonium dihydrogenphosphate	1099
ammonium fluoride	1063
ammonium formate	1065
ammonium heptamolybdate	1069

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ammonium hexafluorosilicate	1064
ammonium hydrogencarbonate	1066
ammonium hydrogenphosphate	1073
ammonium hydrogensulfate	1067
ammonium hydrogensulfide	1068
ammonium hydroxide	1054
ammonium iron(II) sulfate	1046
ammonium iron(III) sulfate	1763
ammonium metatungstate	1055
ammonium molybdate	1069
ammonium nitrate	1070
ammonium oxalate	1071
ammonium peroxodisulfate	1072
ammonium persulfate	1072
ammonium rhodanide	1074
ammonium sulfamate	1075
ammonium sulfate	1076
ammonium sulfide	1077
ammonium thiocyanate	1074
amyl acetate	1078
amyl alcohol	1079
amyl alcohol (mixture of isomers)	1583
sec-amyl alcohol	1745
amyl chloride	1080
amyl laurate	1081
p-tert-amyl phenol	1082
aniline	1083

aniline sulfate	1084
aniline sulfite	1085
aniline-4-sulfonic acid	1050
anilinium sulfate	1084
anilinium sulfite	1085
p-anisaldehyde	1086
anise oil	1088
anisole	1087
antimony pentachloride	1091
antimony trichloride	1092
antimony(III) chloride	1092
antimony(V) chloride	1091
aqua regia	1425
argon	2776
arsenic acid	1095
arsenic sulfides	1096
arsenic trioxide	1097
arsenic(III) oxide	1097
arsenious acid	1094
arsenious acid anhydride	1097
L(+)-ascorbic acid	1098
9-azafluorene	1197
1-azanaphthalene	1202
barium carbonate	1100
barium chloride	1101
barium cyanide	1102
barium hydroxide	1103

barium nitrate	1104
barium peroxide	1105
barium sulfate	1106
barium sulfide	1107
baryta white	1106
beer	1129
beer colour	1130
benzal chloride	1110
benzaldehyde	1111
benzaldehyde oxime	1090
benzamide	1112
benzene	1117
benzenecarboxylic acid	1116
benzene-1,2-dicarboxylic acid	1598
benzenesulfonic acid	1120
benzine	1447
benzoic acid	1116
benzoic acid amide	1112
benzoic acid ammonium salt	1057
benzoic acid anhydride	1118
benzoic acid calcium salt	1172
benzoic acid chloride	1121
benzoic acid sodium salt	1119
benzoic anhydride	1118
benzophenone	1290
benzoyl chloride	1121
benzyl alcohol	1122

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benzyl chloride	1123
N-benzyl-N-ethylaniline	1124
N-benzyl-N-ethylphenylamine	1124
benzylidene chloride	1110
beryllium chloride	1126
beryllium fluoride	1127
beryllium sulfate	1128
biphenyl	1287
1,1-bis(4-chlorophenyl)-2,2,2-trichloroethane	1255
bis(2-hydroxyethyl)amine	1271
bis(2-hydroxyethyl)ether	1273
borax	1546
boric acid	1142
boric acid trimethyl ester	1689
(+/-)-borneol	1417
boron trichloride	1143
boron trifluoride	1144
brandy	1711
brine	1624
brine	1525
bromine	1148
1-bromobutane	1162
1-bromo-2-chloroethane	1145
bromochloromethane	1210
bromoethane	1147
bromoform	1149

bromomethane	1483
1,3-butadiene	1152
butane	1154
butane-1,4-dicarboxylic acid	1029
butanedioic acid	1125
1,4-butanediol	1153
1-butanethiol	1156
butanoic acid	1159
1-butanol	1155
2-butanol	1739
butanone	1328
trans-2-butenal	1239
1-butene	1157
cis-2-butene-1,4-dioic acid	1470
trans-2-butenic acid	1241
2-butoxyethanol	2143
butyl Cellosolve	2143
butyl acetate	1160
butyl acrylate	1028
butyl alcohol	1155
sec-butyl alcohol	1739
butylamine	1161
butyl bromide	1162
butyl chloride	1163
butylene	1157
butyl ether	1260
1-butyl mercaptan	1156

4-tert-butylphenol	1164
butyl phosphate	1165
butylstearate	1653
1-butyne	1158
butyric acid	1159
cadmium acetate	1166
cadmium chloride	1167
cadmium cyanide	1168
cadmium sulfate	1169
calcium acetate	1170
calcium acetylide	1174
calcium arsenate	1171
calcium benzoate	1172
calcium bicarbonate	1180
calcium bisulfite	1192
calcium bromide	1173
calcium carbide	1174
calcium carbonate	1175
calcium chlorate	1176
calcium chloride	1177
calcium chloride hypochlorite	1215
calcium chromate	1178
calcium dihydrogenphosphate	1188
calcium fluoride	1179
calcium hydrogencarbonate	1180
calcium hydrosulfide	1181
calcium hydrosulfite	1192

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calcium hydroxide	1182
calcium nitrate	1184
calcium othoarsenate	1171
calcium oxalate	1185
calcium permanganate	1186
calcium peroxide	1187
calcium sulfate	1189
calcium sulfide	1190
calcium sulfite	1191
(+/-)-camphor	1193
camphor oil	1194
e-caprolactam	1195
e-caprolactone	1196
carbamide	1363
carbazole	1197
carbide	1174
carbon dioxide	1423
carbon disulfide	1199
carbon monoxide	1424
carbon tetrabromide	1669
carbon tetrachloride	1672
carbonic acid diamide	1363
carbonic acid dichloride	1591
carbonyl dichloride	1591
Carbowax	1604
carboxylic acids > C6	1335
Caro's acid	1200

caustic soda	1547
cetylic acid	1578
chloral	1682
chloral hydrate	1206
chloramine B	1207
chloramine mixture: NaOCl + NH3	1728
chloramine mixture: NaOCl + (NH4)2SO4	1729
chloric acid	1219
chloride of lime	1215
chlorine	1213
chlorine, aqueous solution	1224
chlorine dioxide, neutral solution (pH 7)	1821
chloroacetaldehyde	1204
chloroacetic acid	1211
chloroacetic acid ethyl ester	1501
chloroacetic acid methyl ester	1502
chloroacetone	1205
chloroallyl chloride	1268
chlorobenzene	1208
N-chlorobenzenesulfonic acid amide sodium salt	1207
1-chlorobutane	1163
4-chloro-m-cresol	1216
chlorodifluoromethane	1347
1-chloro-2,3-epoxypropane	1307
chloroethanal	1204
chloroethane	1320

chloroethanol	1212
chloroethylene	1696
chloroform	1217
1-chloro-4-hydroxy-2-methylbenzene	1216
chloromethane	1484
chloromethyloxirane	1307
4-chloro-3-methylphenol	1216
1-chloropentane	1080
chlorophenol (2-, 3- a. 4-)	1218
chloropicrin	1686
3-chloro-1,2-propanediol	1361
1-chloro-2-propanone	1205
3-chloropropene	1033
chlorosulfonic acid	1220
chlorosulfuric acid	1220
chlorotoluene (2-, 3- a. 4-)	1221
a-chlorotoluene	1123
chlorotrifluoroethylene	1222
chromatite	1178
chromic acid	1232
chromium alum	1226
chromium(III) chloride	1227
chromium(III) fluoride	1228
chromium(III) hydroxide	1229
chromium(III) nitrate	1230
chromium(III) oxide	1231
chromium(III) potassium sulfate	1226

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chromosulfuric acid	1236
chromosulfuric acid	1234
chromosulfuric acid	1237
chromosulfuric acid	1233
chromosulfuric acid	1235
citric acid	1238
citric acid triammonium salt	1061
citric acid trisodium salt	1528
cod-liver oil	1446
colamine	1313
condensed water	1702
copper tetramine compounds	1438
copper(I) chloride	1429
copper(I) cyanide	1434
copper(II) acetate arsenate(III)	1431
copper(II) carbonate basic	1432
copper(II) carbonate hydroxide	1432
copper(II) chloride	1433
copper(II) fluoride	1437
copper(II) hydroxide carbonate	1432
copper(II) nitrate	1435
copper(II) sulfate	1436
creosote	1426
cresol (o-, m-, a. p-)	1427
cresol sulfonic acid	1428
crotonaldehyde	1239
crotonic acid	1241

crude oil	1309
cumene	1242
cyanamide	1243
cyanoacetic acid ethyl ester	1244
cyclohexanamine	1250
cyclohexane	1246
cyclohexanol	1247
cyclohexanone	1248
cyclohexene	1249
cyclohexylamine	1250
cymene (o-, m- a. p-)	1252
cys	1253
L-cysteine	1253
L-cystine	1254
DDT	1255
decahydronaphthalene	1256
decaline	1256
n-decane	2185
dextran	1257
dextrin	1258
dextrose	1259
diamine	1371
1,2-diaminoethane	1322
dibenzene	1287
dibenzo[b,d]pyrrole	1197
1,2-dibromoethane	1321
dibutyl ether	1260

dibutyl phthalate	1261
dichloroacetic acid	1263
dichlorobenzene (o-, m- a. p-)	1262
dichlorodifluoromethane	1345
dichlorodiphenyltrichloroethane	1255
1,2-dichloroethane	1264
1,1-dichloroethene	1265
1,1-dichloroethylene	1265
dichlorofluoromethane	1346
dichloromethane	1266
1,2-dichloropropane	1267
1,3-dichloropropene	1268
1,2-dichlorotetrafluoroethane	1269
a,a-dichlorotoluene	1110
Diesel fuels	1270
diethanolamine	1271
1,2-diethoxyethane	1325
diethylamine	1272
diethylene glycol	1273
diethyl ether	1274
diethyl glycol	1325
diethyl ketone	1275
diglycol	1273
diglycolic acid	1276
1,4-dihydroxybenzene	1373
diisobutyl ketone	1277
diisopropyl ether	1278

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N,N-dimethylacetamide	1955
dimethylamine	1279
N,N-dimethylaniline	1280
dimethylbenzene (mixture of isomers)	1715
dimethylene oxide	1326
dimethylformamide	1282
N,N-dimethylformamide	1282
2,6-dimethyl-4-heptanone	1277
1,1-dimethylhydrazine	1283
dimethyl ketone	1018
dimethyl phthalate	1284
dimethyl sulfate	1491
1,4-dioxane	1286
diphenyl	1287
diphenylamine	1288
diphenyl ether	1289
diphenyl ketone	1290
diphenyl oxide	1289
disodium hydrogenphosphate	1285
disodium tetraborate	1546
DMAc	1955
DMF	1282
DMP	1284
dodecanoic acid	1442
dodecanoic acid pentyl ester	1081
1-dodecanol	1444
dodecanoyl chloride	1443

EDTA	1323
EDTA DiNa-salt	1731
EDTA TetraNa-salt	1735
epichlorohydrin	1307
1,2-epoxypropane	1610
ethanal	1014
ethane	1311
ethane-1,2-diamine	1322
ethane-1,2-dicarboxylic acid	1125
ethanedioic acid	1575
1,2-ethanediol	1324
ethanenitrile	1020
ethanoic acid	1310
ethanoic anhydride	1016
ethanoic chloride	1023
ethanol	1312
ethanolamine	1313
ethene	1314
ether	1274
ethinylcarbinol	1607
ethyl acetate	1317
ethyl acrylate	1318
ethyl alcohol	1312
ethylbenzene	1319
ethyl bromide	1147
ethyl chloride	1320
ethyl chloroacetate	1501

ethyl cyanoacetate	1244
ethylene	1314
ethylene bromide	1321
ethylene chloride	1264
ethylene chlorohydrin	1212
ethylenediamine	1322
ethylenediaminetetraacetic acid	1323
ethylenediaminetetraacetic acid disodium salt	1731
ethylenediaminetetraacetic acid tetrasodium salt	1735
ethylene glycol	1324
ethylene glycol diethyl ether	1325
ethylene glycol dinitrate	1559
ethylene glycol monobutyl ether	2143
ethylene glycol monomethyl ether	2260
ethylene oxide	1326
ethyl ether	1274
2-ethyl-1-hexanol	1316
ethyl methyl ketone	1328
N-ethyl-N-phenylbenzylamine	1124
ethyne	1024
fatty acids > C6	1335
fatty alcohol sulfates	1332
fatty alcohols	1331
fatty alcohol ethoxylate isoC13O(EO)8	1353
ferric chloride	1298
fish liver oil	1446

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fluorine	1336
fluoroboric acid	1337
fluorosilicic acid	1338
fluorspar	1179
formaldehyde	1340
formamide	1341
formic acid	1047
formic acid amide	1341
formic acid ammonium salt	1065
formic acid methyl ester	1487
formic acid sodium salt	1531
Freon 11 (CFC-11, F-11)	1342
Freon 112 (CFC-112, F-112)	1343
Freon 113 (CFC-113, F-113)	1344
Freon 12 (CFC-12, F-12)	1345
Freon 21 (HCFC-21, F-21)	1346
Freon 22 (CFC-22, F-22)	1347
Frigen 11	1342
Frigen 114	1269
D-fructose	1349
fruit juice, fermented	1565
fruit juice, not fermented	1564
fruit juices	1348
fruit pulp	1563
furan	1350
furfural	1351
furfuryl alcohol	1352

2-furylaldehyde	1351
2-furylmethanol	1352
gallotannic acid	1665
gasoline, free of lead and aromatics	1113
gasoline, Super	1114
gelatine	1356
Genapol X-080	1353
D(+)-glucose	1259
glutamic acid	1358
glycerol	1360
glycine	1051
glycol	1324
glycolic acid	1359
guajacol/cresol-mixture	1426
gypsum	1189
n-heptane	1364
hexachloroethane	1584
hexadecanoic acid	1578
hexafluorosilicic acid	1338
hexahydro-2H-azepin-2-one	1195
hexahydrobenzene	1246
hexahydrotoluene	1485
n-hexane	1365
hexanedioic acid	1029
1,2,6-hexanetriol	1366
6-hexanolide	1196
honey	1370

hydrazine	1371
hydrazine hydrate	1372
hydrazinium hydroxide	1372
hydriodic acid	1383
hydrobromic acid	1151
hydrochloric acid	1623
hydrocyanic acid	1132
hydrofluoric acid	1339
hydrogen	1708
hydrogen chloride	1225
hydrogen cyanide	1132
hydrogen peroxide	1709
hydrogen sulfide	1635
hydrogen superoxide	1709
hydrogen tetrafluoroborate	1337
hydroquinone	1373
hydroxyacetic acid	1359
hydroxyaluminium diacetate	1034
hydroxybenzene	1588
2-hydroxybenzoic acid	1620
2-hydroxybenzoic acid methyl ester	1490
hydroxybutanedioic acid	1093
6-hydroxyhexanoic acid lactone	1196
hydroxylamine sulfate	1374
hydroxylammonium sulfate	1374
2-hydroxymethylfuran	1352

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2-hydroxy-1,2,3-propanetricarboxylic acid	1238
3-hydroxypropene	1032
2-hydroxypropionic acid	1493
hydroxysuccinic acid	1093
2,2'-iminodiethanol	1271
iodine	1380
iodine potassium iodide solution	1381
iron oxalate	1303
iron(II) chloride	1296
iron(II) hydroxide	1297
iron(II) nitrate	1301
iron(II) sulfate	1302
iron(II)/(III) oxalate	1303
iron(III) chloride	1298
iron(III) chloride sulfate	1295
iron(III) nitrate	1299
iron(III) sulfate	1300
isobutyl methyl ketone	1488
isobutyltrimethylmethane	1377
isooctane	1377
isooctanol	1316
isopropanol	1378
Isopropyl alcohol	1378
isopropylbenzene	1242
isopropyl ether	1278
Isopropylmethylbenzene (o-, m- a. p-)	1252

isovalerone	1277
kerosene	1586
lactic acid	1493
lactic acid sodium salt	1535
D(+)-lactobiose	1439
D(+)-lactose	1439
lanolin	1440
latex	1441
lauric acid	1442
lauric acid amyl ester	1081
lauric acid chloride	1443
lauroyl chloride	1443
lauryl alcohol	1444
lead tetraethyl	1673
lead(II) acetate	1133
lead arsenate	1134
lead(II) carbonate	1135
lead(II) chloride	1137
lead(II) hydrogenarsenate	1134
lead(II) nitrate	1138
lead(II) sulfate	1139
light oil	1448
light petrol	1447
lighting gas, benzene-free	1451
lignoceryl alcohol	1698
lime	1175
lime milk	1182

linoleic acid	1453
linseed oil	1450
liqueurs	1452
liquid manure	1379
lithium bromide	1455
lithium carbonate	1456
lithium chloride	1457
lithium hydroxide	1459
lithium sulfate	1460
magnesium carbonate basic	1462
magnesium chloride	1463
magnesium fluoride	1464
magnesium hydroxide	1465
magnesium nitrate	1466
magnesium oxide	1467
magnesium sulfate	1468
magnesium sulfite	1469
maleic acid	1470
malic acid	1093
malonic acid	1478
manganese dioxide	1472
manganese(II) chloride	1471
manganese(II) sulfate	1473
manganese(IV) oxide	1472
marmelade	1474
mercaptoacetic acid	1676
mercury	1612

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mercury(II) chloride	1614
mercury(II) cyanide	1615
mercury(II) nitrate	1616
methacrylic acid methyl ester	1489
methanal	1340
methane	1477
methanedicarboxylic acid	1478
methanesulfonic acid	1480
methanoic acid	1047
methanol	1479
4-methoxybenzaldehyde	1086
methoxybenzene	1087
2-methoxyethanol	2260
methyl acetate	1481
methyl Cellosolve	2260
methyl chloride	1484
methyl formate	1487
methyl salicylate	1490
methylacetic acid	1608
methyl alcohol	1479
methylamine	1482
methylbenzene	1679
4-methylbenzenesulfonic acid	1582
methylbromide	1483
4-(2-methyl-2-butyl)phenol	1082
methyl chloroacetate	1502
methyl cyanide	1020

methylcyclohexane	1485
methylene chloride	1266
methyl ethyl ketone (MEK)	1328
methyl isobutyl ketone (MIBK)	1488
methyl methacrylate	1489
4-methyl-2-pentanone	1488
methylphenol (o-, m-, a. p-)	1427
methyl phenyl ether	1087
methyl phenyl ketone	1021
(S)-(-)-1-methyl-2-(3-pyridyl)pyrrolidine	1554
methylsulfuric acid	1480
milk	1492
milk sugar	1439
mineral oils	1494
mineral water	1704
mixed acid: H ₂ SO ₄ 18%, HNO ₃ 15%, HF 5%	1499
mixed acid: H ₂ SO ₄ 25%, HNO ₃ 25%, HF 10%	1506
mixed acid: H ₂ SO ₄ 50%, HNO ₃ 33%	1497
mixed acid: H ₂ SO ₄ 50%, HNO ₃ 50%	1498
mixed acid: HCl 27%, HNO ₃ 18%	1425
mixed acid: HNO ₃ 12%, HF 5%	1723
mixed acid: HNO ₃ 20%, H ₂ SO ₄ 10%	1495
mixed acid: HNO ₃ 20%, HF 5%	1724
mixed acid: HNO ₃ 50%, HF 10%	1500
mixed acid: HNO ₃ 59%, HF 4,5%	1503
mixed acid: HNO ₃ 87%, H ₂ SO ₄ 10%	1496

molasses	1476
Monoamyl phthalate	1599
monobutyl phthalate	1600
monochloroacetic acid	1211
monochloroacetic acid ethyl ester	1501
monochloroacetic acid methyl ester	1502
monochloroacetone	1205
monochlorobenzene	1208
monopentyl phthalate	1599
morpholine	1505
murcury(II) sulfate	1613
naphthalene	1507
naphthalene sulfonic acid (mixture of isomers)	1508
natural gas	1308
niacin	1555
nickel(II) chloride	1548
nickel(II) nitrate	1549
nickel(II) sulfate	1550
nickel(II) sulfide	1551
nickel(II) sulfite	1552
nickel(II) L-tartrate	1553
(S)-(-)-nicotine	1554
nicotinic acid	1555
nitric acid	1621
2,2',2"-nitrilotriethanol	1687
nitrobenzene	1556

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nitrobenzoic acid (o-, m- a. p-)	1557
nitrogen	1659
nitroglycol	1559
nitrophenol (o-, m- a. p-)	1560
nitrotoluene (o-, m- a. p-)	1562
nitrotrichloromethane	1686
nitrous acid	1622
nitrous gases	1007
cis,cis-9,12-octadecadienoic acid	1453
octadecanoic acid	1652
octadecanoic acid butyl ester	1653
cis-9-octadecenoic acid	1573
n-octane	1566
octyloxytoluene (o-, m-, a. p-)	1567
octyl tolyl ether (o-, m-, a. p-)	1567
oil (vegetable + animal)	1569
oil of turpentine	1668
oleic acid	1573
oleum	1570
oleum vapours	1571
olive oil	1572
orthophosphoric acid	1574
orthosilicic acid	1421
oxalic acid	1575
oxalic acid calcium salt	1185
oxalic acid diammonium salt	1071
oxalic acid iron salts	1303

oxirane	1326
oxolane	1674
oxygen	1625
ozone	1576
PABA	1049
PAC	1603
palm kernel oil	1579
palm seed oil	1579
palmitic acid	1578
paraffin oil	1694
2,4-pentanedione	1022
pentanol (mixture of isomers)	1583
1-pentanol	1079
2-pentanol	1745
3-pentanone	1275
1-pentyl acetate	1078
1-pentyl chloride	1080
perchloric acid	1585
perchloroethane	1584
perchloroethylene	1671
peroxomonosulfuric acid	1200
peroxosulfuric acid	1200
petrol-benzene mixture	1115
petroleum	1309
petroleum ether	1447
phenol	1588
N-phenylacetamide	1017

phenylamine	1083
N-phenylaniline	1288
4-phenylazoaniline	1048
phenylethane	1319
phenyl ether	1289
phenylethylene	1656
phenylformic acid	1116
phenylhydrazine	1590
2-phenylpropane	1242
phenylsulfonic acid	1120
phosgene	1591
phosphane	1594
phosphine	1594
phosphoric acid	1574
phosphoric acid butyl ester	1165
phosphoric acid tributyl ester	1681
phosphoric acid trichloride	1597
phosphoric acid trioctyl ester	1690
phosphoroxo chloride	1597
phosphorus pentoxide	1596
phosphorus trichloride	1595
phosphorus(III) chloride	1595
phosphorus(V) oxide	1596
phosphoryl chloride	1597
phthalic acid	1598
phthalic acid dibutyl ester	1261
phthalic acid dimethyl ester	1284

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phthalic acid monobutyl ester	1600
phthalic acid monopentyl ester	1599
picric acid	1601
pivaloyl chloride	2218
polyaluminium chloride	1603
polydimethylsiloxane	1643
polyethylene glycol	1604
polyglycol, PEG	1604
potash	1395
potash lye	1384
potassium acetate	1386
potassium alum	1030
potassium aluminium sulfate	1030
potassium bicarbonate	1387
potassium bisulfate	1389
potassium bisulfite	1390
potassium borate	1392
potassium bromate	1393
potassium bromide	1394
potassium carbonate	1395
potassium chlorate	1396
potassium chloride	1397
potassium chlorite	1398
potassium chromate	1399
potassium chromium(III) sulfate	1226
potassium cyanate	1400
potassium cyanide	1401

potassium dichromate	1388
potassium dihydrogenphosphate	1411
potassium ferricyanide	1330
potassium ferrocyanide	1329
potassium fluoride	1402
potassium hexacyanoferrate(II)	1329
potassium hexacyanoferrate(III)	1330
potassium hydrogencarbonate	1387
potassium hydrogensulfate	1389
potassium hydrogensulfite	1390
potassium hydrogen-L-tartrate	1391
potassium hydroxide	1384
potassium hypochlorite	1403
potassium iodate	1404
potassium iodide	1405
potassium manganate(VII)	1409
potassium metaborate	1406
potassium nitrate	1385
potassium nitrite	1407
potassium perchlorate	1408
potassium permanganate	1409
potassium peroxodisulfate	1410
potassium persulfate	1410
potassium polyiodide solution	1381
potassium sulfate	1412
potassium sulfide	1413
potassium sulfite	1414

potassium L-tartrate	1415
propane	1605
propanedioic acid	1478
1,2-propanediol	1609
propanetriol	1360
propanoic acid	1608
1-propanol	1606
2-propanol	1378
propanone	1018
propargyl alcohol	1607
propene oxide	1610
2-propenoic acid ethyl ester	1318
propenol	1032
2-propin-1-ol	1607
propionic acid	1608
propyl alcohol	1606
propylene oxide	1610
propylene chloride	1267
1,2-propylene glycol	1609
prussiate, red	1330
prussiate, yellow	1329
pure water	1705
pyridine	1611
pyridine-3-carboxylic acid	1555
quinine	1201
quinol	1373
quinoline	1202

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salicylic acid	1620
salicylic acid methyl ester	1490
Schweinfurter Green	1431
seawater	1703
silicic acid	1421
silicone oil	1643
silver acetate	1638
silver chloride	1639
silver cyanide	1640
silver nitrate	1641
silver sulfate	1642
slaked lime	1182
soap	1627
soap hydrous solution	1637
soda	1522
soda lye	1547
soda water glass	1542
sodium acetate	1509
sodium aluminate	1510
sodium arsenate	1511
sodium arsenite	1512
sodium benzoate	1119
sodium bicarbonate	1513
sodium bisulfate	1515
sodium bisulfide	1517
sodium bisulfite	1518
sodium bromate	1520

sodium bromide	1521
sodium carbonate	1522
sodium chlorate	1524
sodium chloride	1525
sodium chlorite	1526
sodium chromate	1527
sodium citrate	1528
sodium cyanide	1529
sodium dichromate	1514
sodium fluoride	1530
sodium fluorosilicate	1420
sodium formate	1531
sodium hexafluorosilicate	1420
sodium hydrogencarbonate	1513
sodium hydrogenphosphate	1285
sodium hydrogensulfate	1515
sodium hydrogensulfide	1517
sodium hydrogensulfite	1518
sodium hydroxide	1547
sodium hypochlorite	1209
sodium hypophosphite	1533
sodium iodide	1534
sodium lactate	1535
sodium metasilicate	1542
sodium nitrate	1536
sodium nitrite	1537
sodium perborate	1519

sodium perchlorate	1538
sodium peroxide	1539
sodium peroxoborate	1519
sodium peroxodisulfate	1540
sodium persulfate	1540
sodium phosphate	1541
sodium phosphinate	1533
sodium silicate	1542
sodium sulfate	1543
sodium sulfide	1544
sodium sulfite	1545
sodium tetraborate	1546
sodium thiosulfate	1089
soft soap	1627
sperm oil	1644
spin bath acid with carbondisulfide	1646
starch	1649
starch gum	1258
starch sirup	1650
stearic acid	1652
stearic acid butyl ester	1653
strontium chloride	1655
styrene	1656
succinic acid	1125
sugar sirup	1722
sulfamic acid	1657
sulfamic acid ammonium salt	1075

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sulfanilic acid	1050
sulfur	1628
sulfur dioxide, aqueous solution	1636
sulfur dioxide, gaseous	1629
sulfur trioxide	1634
sulfuric acid	1632
sulfuric acid anhydride	1634
sulfuric acid dimethyl ester	1491
sulfurous acid	1636
sulfurous acid dichloride	1677
SurTec 104 universal cleaner	1658
table salt	1525
Tanigan® extra A	1660
Tanigan® extra B	1661
Tanigan® extra D	1662
Tanigan® F	1663
Tanigan® U	1664
tannic acid	1665
tannin	1665
tartar	1391
L(+)-tartaric acid	1713
L(+)-tartaric acid dipotassium salt	1415
L(+)-tartaric acid monopotassium salt	1391
L(+)-tartaric acid nickel salt	1553
tartaric acid, naturally	1713
TBP	1681
TCE	1670

TEL	1673
tetrabromomethane	1669
1,1,2,2-tetrachloro-1,2-difluoroethane	1343
1,1,2,2-tetrachloroethane	1670
tetrachloroethene	1671
tetrachloroethylene	1671
tetrachloromethane	1672
1-tetracosanol	1698
tetraethyllead	1673
tetrafluoroboric acid	1337
1,2,3,4-tetrahydrobenzene	1249
tetrahydrofuran	1674
1,2,3,4-tetrahydronaphthalene	1675
tetrahydro-1,4-oxazine	1505
Tetralin®	1675
tetramethylene glycol	1153
THF	1674
thioglycolic acid	1676
thionyl chloride	1677
thiophene	1678
tin(II) chloride	1721
Titriplex® II	1323
Titriplex® III	1731
toluene	1679
p-toluenesulfonic acid	1582
triammonium citrate	1061
tribromomethane	1149

tributyl phosphate	1681
trichloroacetaldehyde	1682
trichloroacetaldehyde hydrate	1206
trichloroacetic acid	1684
trichlorobenzene (mixture of isomers)	1683
trichloroborane	1143
trichloroethene	1685
trichloroethylene	1685
trichlorofluoromethane	1342
trichloromethane	1217
trichloronitromethane	1686
1,2,2-trichloro-1,1,2-trifluoroethane	1344
triethanolamine	1687
triethylene glycol	1688
trifluoroborane	1144
trifluorovinyl chloride	1222
triglyceride	1333
triglycol	1688
1,2,6-trihydroxyhexane	1366
2,6,8-trihydroxypurine	1362
trimethylacetyl chloride	2218
trimethyl borate	1689
2,2,4-trimethylpentane	1377
2,4,6-trinitrophenol	1601
triocetyl phosphate	1690
trioxygen	1576
trisodium citrate	1528

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trisodium phosphate	1541
turpentine	1666
turpentine substitute	1667
urea	1363
uric acid	1362
urine	1692
vaseline	1693
vaseline oil	1694
vinyl acetate	1695
vinylbenzene	1656
vinyl chloride	1696
vinyl cyanide	1027
vinylidene dichloride	1265
viscose spinning solutions	1697
vitamin C	1098
waste gas with carbon dioxide	1006
waste gas with carbon monoxide	1005
waste gas with hydrogen cyanide	1003
waste gas with hydrogen fluoride	1004
waste gas with nitrous gases	1007
waste gas with sulfur dioxide	1010
waste gas with sulfur trioxide	1012
water, condensed	1702
water, mineral water	1704
water, pure	1705
water, seawater	1703
water, traces of butanol and phenol	1706

wax alcohol	1698
wine vinegar	1712
wine, red and white	1710
xylene (mixture of isomers)	1715
zinc carbonate basic	1716
zinc chloride	1717
zinc hydrogenphosphate	1719
zinc hydroxide carbonate	1716
zinc nitrate	1718
zinc sulfate	1720

Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
HCN CHN	1003	waste gas with hydrogen cyanide		gf	GK	20	+	+	+	+	+	+	+	+	+													
		gf	GK	40					+	+	+	+																
		gf	GK	60						+	+	+																
		gf	GK	80						+	+	+																
		gf	GK	100						+	+	+																
		gf	GK	120							+	+																
HF	1004	waste gas with hydrogen fluoride		gf	GK	20	+	+	+	-	+	+	+	+	+		+	+	+	+						+	+	+
		gf	GK	40	+	+	+		+	+	+		+	+		0	+	+	+						+	+	+	
		gf	GK	60	+	+	+		+	+	+		+	+			0	+	+						+	+	+	
		gf	GK	80					+	+	+							+	+									
		gf	GK	100					+	+	+																	
		gf	GK	120					+	+	+																	
CO	1005	waste gas with carbon monoxide		gf	GK	20	+	+	+	+	+	+		+	+		+	+	+	+								
		gf	GK	40	+	+	+	+	+	+	+		+	+		+	+	+	+									
		gf	GK	60	+	+	+	+	+	+	+		+	+		+	+	+	+									
		gf	GK	80			+	+	+	+	+			+				+	+	+								
		gf	GK	100					+	+	+								+	+								
		gf	GK	120					+	+	+								+	+								
CO2	1006	waste gas with carbon dioxide		gf	GK	20	+	+	+	+	+	+		+	+		+	+	+	+	+					+	+	+
		gf	GK	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+					+	+	+	
		gf	GK	60	+	+	+	+	+	+	+		+	+		+	+	+	+	+					+	+	+	
		gf	GK	80					+	+	+										+							
		gf	GK	100					+	+	+										+							
		gf	GK	120						+	+	+																

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1007	waste gas with nitrous gases	gf	GK	20	+	+	+	+	+	+	+		0	+	+	0	+	+	+	+							+		
		nitrous gases	gf	GK	40	+	+	+	+	+	+	+			+		0	+	+	+	+						+		
		NOx	gf	GK	60	+	+	0	0	+	+	+				0		-	+	+	+	+						+	
			gf	GK	80					+	+	+							0	+	+	+							
			gf	GK	100					+	+	+								0	0	+							
			gf	GK	120					+	+	+									+								
1010	waste gas with sulfur dioxide	gf	GK	20	+	+	+	+	+	+	+		+	+		0	+	+	+	+							+		
		SO2 O2S	gf	GK	40	+	+	+	+	+	+	+		+	+		-	+	+	+	+							+	
			gf	GK	60	+	+	+	+	+	+	+		0	+			+	+	+	+							+	
			gf	GK	80			+	+	+	+	+			+			+	+	+	+							+	
			gf	GK	100					+	+	+							+	+	+							0	
			gf	GK	120						+	+																-	
1012	waste gas with sulfur trioxide	gf	GK	20	+	+	+	+	+	+	+			+		0	+	+	+										
		SO3 O3S	gf	GK	40	+	+	+	+	+	+	+			+		-	+	+	+									
			gf	GK	60	+	+	0	0	+	+	+			0			+	+	+									
			gf	GK	80			0	0	+	+	+			0			0	+	+									
			gf	GK	100					+	+	+																	
1014	acetaldehyde	ethanal	wä	10%	20	+	+	+	+	+	+		0	+		-	+	+	+	+	+	+	+	+	+	+	+	0	
		wä	10%	40	0	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	-	
		CH3CHO	wä	10%	60			+	+	+	+	+			+			+	0	0	+	+					+	+	
			wä	10%	80			+	+	+	+	+			+			+				+					+	+	
		C2H4O	wä	40%	20	0	+	+	+	+	+	+		0	+		-	+	+	+	+	+	+	+	+	+	+	+	0
			wä	40%	40	0	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	-
			wä	40%	60	-		+	+	+	+	+			+			+	0	0	-	+					+	+	
				TR	20	-	+	0	0	-	+	+		-	0			-	-	-	-	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1015	acetamide	wä	GL	20		+	+	+		+	+			+		0	-	+	+	+	+		+	+	+				
		wä	GL	40		+	+	+		+	+			+		-		+	+	+	+		+	+	+				
		wä	GL	60		+	+	+		+	+				+				+	+	+			+	+				
		wä	GL	80							+	+									+								
		wä	GL	100							+	+									+								
		acetic acid amide																											
		CH3CONH2																											
		C2H5NO																											
1016	acetic anhydride		TR	20	-	+	+	+	-	+	+		-	+		-	+	-	-	+	+	+	+	+	+	+	0	+	+
			TR	40		0	0	0		+	+			0						+	+	+	+	+	+		+	+	
			TR	60		-	-	-		+	+				-							+		+	+	+		+	+
			TR	80						+	+											+		+	+	+		+	+
			TR	100						+	+											+							
			TR	120						+	+											+							
		ethanoic anhydride																											
		(CH3CO)2O																											
		C4H6O3																											
1017	acetanilide	wä	GL	20	+					+	+					0	-	0	0		+	+	+	+	+				
		wä	GL	40	+					+	+								0	0		+	+	+	+	+			
		wä	GL	60						+	+								0	0		+		+	+	+			
		wä	GL	80						+	+								0	0		+		+	+	+			
		wä	GL	100						+	+										+								
		N-phenylacetamide																											
		acetic acid anilide																											
		CH3CONHC6H5																											
		C8H9NO																			+								

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

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UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1018	acetone	wä	1%	20	-	+	+	+	+	+	+	+	+	-	+	-	-	+	+	+	+	+	+	+	+	+	
		wä	1%	40		+	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	
		wä	1%	60		+	+	+	+	+			+			+			+	+	+	+	+	+	+	+	
		wä	1%	80					+	+									+	+				+	+	+	
		wä	1%	100					+	+									+	+				+	+	+	
		wä	10%	20	-	+	+	+	+	+	-		+		-	+	-	-	+	+	+	+	+	+	+	+	+
		wä	10%	40		+	+	+	+	+			+			+			+	+	+	+	+	+	+	+	
		wä	10%	60		+	+	+	0	+	+		+			+			+	+	+	+	+	+	+	+	
		wä	10%	80					+	+						+			+	+				+	+	+	
		wä	10%	100					+	+									+	+							
			TR	20	-	+	+	+	-	+	+	-	-	+	-	-	+	-	-	+	+	+	+	+	+	+	+
			TR	40		+	+	+		+	+		+	+			0			+	+	+	+	+	+	+	+
			TR	60		+	+	+		+	+		+	+						+	+		+	+	+	+	+
1020	acetonitrile		TR	20	-	+	+	+	+	+	+	-	+		0	-	0	0	+	+	+	+	+	+	+	+	
			TR	40	-	+	+	+	+	+	+		+			0		0	0	+	+		+	+	+	+	
			TR	60	-	+	+	+	0	+	+		+			0		0	0		+				+	+	
			TR	80					+	+										+					+	+	
1021	acetophenone		TR	20	-	+	+	+	-	+	+	-		+				+	+			+	+	+	+	+	
			TR	40			+	+		+	+		+						+	+		+	+	+	+	+	
			TR	60			0	0		+	+		0						+	+		+	+	+	+	+	
			TR	80			-	-		+	+		-							+		+	+	+	+	+	
			TR	100					+	+										+					+	+	
			TR	120					+	+															+	+	

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1022	acetylacetone	20	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		40	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		60	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		80	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
1023	acetyl chloride	20	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		40	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		60	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		80	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
		100	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
1024	acetylene	20	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		40	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		60	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		80	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		100	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
1025	acetylsalicylic acid	20	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		40	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		60	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		80	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
		100	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
1027	acrylonitrile	20	-	+	+	+	0	+	+	0	+	+	-	+	0	0	+	+
		40	-	+	0	0	-	+	+	0	0	0	-	+	0	0	+	+
		60	-	+	0	0	-	+	+	0	0	0	-	+	0	0	+	+
		80	-	+	0	0	-	+	+	0	0	0	-	+	0	0	+	+
		100	-	+	0	0	-	+	+	0	0	0	-	+	0	0	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1028 acrylic acid butyl ester butyl acrylate CH ₂ =CHCO ₂ (CH ₂) ₃ CH ₃ C ₇ H ₁₂ O ₂	TR	20	-	+	+	+	+	+	+	+	+	+	+	-	0	-	-	+	+	+	+	+	+	+	+	+
	TR	40		0	0	0		+	+			0						+	+	+	+	+	+	+	+	+
	TR	60						+	+										+		+	+	+	+	+	+
	TR	80						+	+										+		+	+	+	+	+	+
	TR	100						+	+										+		+		+	+	+	+
1029 adipic acid butane-1,4-dicarboxylic acid hexanedioic acid HO ₂ C(CH ₂) ₄ CO ₂ H C ₆ H ₁₀ O ₄	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80			+	+	+	+			+						+	+		+	+				+
	wä	GL	100					+	+										+		+		+			+
1030 alum potassium aluminium sulfate potassium alum KAl(SO ₄) ₂ AlK ₂ O ₈ S ₂	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+
	wä	10%	40	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+			+
	wä	10%	60	+	+	+	+	+	+	+		+		-	+	+	+	+	+	+	+	+	+			+
	wä	10%	80					+	+	+					+	+	+	+	+	+	+	+	+			+
	wä	10%	100					+	+	+					+	+	+	+	+	+						
	wä	GL	20	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+			+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+			+
	wä	GL	60	+	+	+	+	+	+	+		+		-	+	+	+	+	+	+	+	+	+			+
	wä	GL	80					+	+	+					+	+	+	+	+	+	+	+	+			+
	wä	GL	100					+	+	+					+	+	+	+	+	+						
1031 alkanesulfonic acids (mixtures) RSO ₃ H	wä	10%	20	+	+	+	+	+	+					0	+	+	+	+	+	+	+	+	+			+
	wä	10%	40	+	+	+	+	+	+							+	+	+	+	+	+	+	+			+
	wä	10%	60	+				+	+	+							+	+	+		+	+	+			+
	wä	10%	80					+	+	+								+	+		+	+	+			+
	wä	10%	100					+	+									+	+							+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																							
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1032	allyl alcohol	20	0	+	+	+	+	+	+	+	-	0	+	+	0	0	+	+	+	+	+	+	+	+	+	+
propenol 3-hydroxypropene CH2=CHCH2OH C3H6O	TR	40	-	+	+	+	+	+	+	+				0	-	-	+	+	+	+	+	+	+	+	+	+
	TR	60		+	+	+	+	+	+	+				0			+	+	+	+	+	+	+	+	+	+
	TR	80						+	+	+								+		+	+	+	+	+	+	+
	TR	100						+	+	+								+		+		+	+	+	+	+
1033	allyl chloride	20	-	0			+	+	+	+				-				+	+	+	+	+	+	+	+	+
3-chloropropene CH2=CHCH2Cl C3H5Cl P	TR	40	-	-			+	+	+	+							+		+	+	+	+	+	+	+	
1034	aluminium acetate basic	20	+	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+			+
hydroxyaluminium diacetate (CH3CO2)2AlOH C4H7AlO5	GL	40	+	+	+	+	+	+	+	+			+				+	+	+	+	+	+			+	
	GL	60					+	+	+	+							+	+	+	+	+	+			+	
	GL	80					+	+	+	+															+	
	GL	100					+	+	+	+																
1035	aluminium ammonium sulfate	20	+	+	+	+	+	+	+	+			+	+			+	+	+	+	+	+	+			+
ammonium aluminium sulfate ammonium alum AlNH4(SO4)2 H4AlNO8S2	GL	40	+	+	+	+	+	+	+	+			+	+			+	+	+	+	+	+			+	
	GL	60		+	+	+	+	+	+	+			+				+	+	+	+	+	+			+	
	GL	80					+	+	+	+							+	+	+	+	+	+			+	
	GL	100						+	+	+							+	+	+							
1036	aluminium chlorate	20	+				+	+	+	+								+	+	+	+	+			+	
Al(ClO3)3 AlCl3O9	GL	40					+	+	+	+								+	+	+	+	+			+	
	GL	60					+	+	+	+								+		+	+	+				
	GL	80					+	+	+	+								+								
	GL	100						+	+	+								+								

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																					
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301
1037 aluminium chloride	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	60	+	+	+	+	+	+	0	0	+	+	0	+	+	+	+	+	+	+	+	+	+
	wä	10%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	0	0	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+
1039 aluminium iron(II) sulfate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1040 aluminium fluoride	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1041 aluminium fluorosilicate	TR	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	TR	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	TR	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	TR	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	TR	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

				UBBE																									
Chemical Resistance				Release Date: 2023-02-17																									
Condition	Concentration	Temperature [°C]		PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1042	aluminium hydroxide	TR	20	+	+	+	+	+	+	+			+																
		TR	40		+	+	+	+	+	+	+			+															
		TR	60		+	+	+	+	+	+	+			+															
		TR	80					+	+	+	+																		
		TR	100					+	+	+	+																		
Al(OH)3 H3AlO3																													
	1043	aluminium nitrate	wä	GL	20	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+			+	
			wä	GL	40	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+			+	
			wä	GL	60		+	+	+	+	+	+			+						+	+	+	+	+			+	
wä			GL	80					+	+	+									+	+	+	+	+			+		
wä			GL	100					+	+	+									+	+	+					+		
Al(NO3)3 AlN3O9																													
	1044	aluminium oxide	TR	20	+	+	+	+	+	+	+			+															
			TR	40					+	+	+																		
			TR	60					+	+	+																		
TR			80					+	+	+																			
TR			100					+	+	+																			
alumina Al2O3																													
	1045	aluminium sulfate	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			wä	10%	60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	0	+	+
wä			10%	80			+	+	+	+	+			+				+	+	+	+	+	+	+	+	0	+	+	
wä			10%	100					+	+	+									+	+	+	+	+	+	0	+	+	
wä			GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	
wä			GL	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	
wä			GL	60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	-	0	+	
wä			GL	80			+	+	+	+	+			+				+	+	+	+	+	+	+	+		0	+	
wä			GL	100					+	+	+									+	+	+	+		+		0	+	
Al2(SO4)3 Al2O12S3																													

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Chemical Resistance

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1046	ammonium iron(II) sulfate		wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
(NH4)2Fe(SO4)2 H8FeN2O8S2			wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	10%	60	0	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	
			wä	10%	80			+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	
			wä	10%	100					+	+	+						+	+	+	+	+		+		+	+	
			wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			wä	GL	60	0	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+		
			wä	GL	80			+	+	+	+	+			+			+	+	+	+	+	+	+	+	+		
			wä	GL	100					+	+	+						+	+	+	+	+		+		+	+	

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
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Chemical Resistance

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UBBE		Chemical Resistance																				
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1047	formic acid	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
methanoic acid HCO2H CH2O2	P	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
		wä	10%	60	0	+	+	+	+	+	+	+	+	+	+	+	0	+	+			
		wä	10%	80			+	+	+	+	+	+	+	+	+	+	+	0	+			
		wä	10%	100					+	+	+	+						0				
		wä	25%	20	+	+	+	+	+	+	+	+	-		+	+	+	+	+			
		wä	25%	40	+	+	+	+	+	+	+	+			0		+	+	+			
		wä	25%	60	0	+			+	+	+	+				+	+	-	0	+		
		wä	25%	80					+	+	+	+				+	+		0	+		
		wä	25%	100					+	+	+	+				+			0			
		wä	50%	20	+	+	+	+	+	+	+	+	-		+	+	+	+	+	+		
		wä	50%	40	+	+	+	+	+	+	+	+		0	+	+	+	+	0	+	+	
		wä	50%	60	0	+	0	0	+	+	+	+			0		+	+	-	0	+	
		wä	50%	80					+	+	+	+				0	+	+		0	+	
		wä	50%	100					+	+	+	+					+			0		
		wä	85%	20	+	+	+	+	+	+	+	+	-		+	-	+	+	+	+	+	
		wä	85%	40	0	+	+	+	+	+	+	+			+		0	+	+	0	+	+
		fe	TR	20	+	+	+	+	+	+	+	+	-	0	+	-	0	+	+	+	+	+
		fe	TR	40	0	+	+	+	+	+	+	+		0	+		0	+	+	0	+	+
1048	p-aminoazobenzene		TR	20	+					+	+											
4-phenylazoaniline		TR	40	0						+	+											
		TR	60							+	+											
		TR	80							+	+											
C6H5N=NC6H4NH2		TR	80							+	+											
C12H11N3		TR	100							+	+											

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Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1049	4-aminobenzoic acid	wä	GL	20	+	+	+	+		+	+			+						+	+	+	+	+	+			+	
		PABA	wä	GL	40		+	+	+		+	+			+						+	+	+	+	+	+		+	
			wä	GL	60		+	+	+		+	+			+						+	+	+	+	+	+		+	
		4-(NH2)C6H4CO2H	wä	GL	80						+	+									+	+	+	+	+	+		+	
		C7H7NO2	wä	GL	100						+	+									+	+	+					+	
1050	4-aminobenzenesulfonic acid	wä	GL	20	+	+	+	+		+	+			+						+	+	+	+	+	+			+	
		sulfanilic acid	wä	GL	40		+	+	+		+	+			+						+	+	+	+	+	+		+	
		aniline-4-sulfonic acid	wä	GL	60						+	+									+	+	+	+	+	+		+	
		4-(NH2)C6H4SO3H	wä	GL	80						+	+									+	+	+	+	+	+		+	
		C6H7NO3S	wä	GL	100						+	+									+	+	+					+	
1051	aminoacetic acid	wä	10%	20	+	+	+	+	+	+	+	-		+		+	+	+	+	+	+	+	+	+	+		+	+	
		glycine	wä	10%	40	+	+	+	+	+	+	+	-		+		0	+	+	+	+	+	+	+	+			+	
			wä	10%	60		+	+	+	+	+	+			+						+	+	+	+	+	+		+	
		NH2CH2CO2H	wä	10%	80					+	+	+									+	+	+	+	+	+		+	
		C2H5NO2	wä	10%	100						+	+									+	+	+					+	
1052	amino acids	wä	GL	20	+	+	+	+	+	+	+			+						+	+	+						+	
		aminocarboxylic acids	wä	GL	40		+	+	+	+	+	+			+						+	+	+					+	
			wä	GL	60					+	+	+									+	+	+						
		NH2CH(R)CO2H	wä	GL	80					+	+	+										+	+						
			wä	GL	100						+	+										+	+						
1053	ammonia, gaseous	gf	TR, GK	20	+	+	+	+	0	+	+		+	+		+	+	-	-	+							+	+	+
			gf	TR, GK	40	+	+	+	+	0	+	+			+		0	+			+						+	+	+
			gf	TR, GK	60	+	+	+	+	0	+	+			+		-	+			+						+	+	+
		NH3	gf	TR, GK	80						+	+																+	
		H3N	gf	TR, GK	100						+	+																	
																</													

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3
1054 ammonia, aqueous solution ammonium hydroxide NH3 • xH2O, NH4OH H3N	wä	0,5%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	0,5%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	0,5%	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	0,5%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	1%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	1%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	1%	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	1%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	20	+	+	+	+	0	+	+	+	+	+	+	+	-	-	+	+	+	+
	wä	10%	40	+	+	+	+	0	+	+	+	+	+	0	+	+	+	+	+	+	+
	wä	25%	20	+	+	+	+	-	+	+	+	+	+	+	+	-	-	+	+	+	+
	wä	25%	40	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+
1055 ammonium metatungstate (NH4)6H2W12O40 H26N6O40W12	TR	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	TR	40						+	+												
	TR	60						+	+												
	TR	80						+	+												
	TR	100						+	+												
	TR	120						+	+												
1056 ammonium acetate CH3CO2NH4 C2H7NO2	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80			+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+
	wä	GL	100			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1057	ammonium benzoate	wä	GL	20		+	+	+						+						+	+	+	+	+	+			+
	benzoic acid ammonium salt	wä	GL	40		+	+	+						+						+	+	+	+	+	+			+
		wä	GL	60																+	+	+	+	+	+			+
	C6H5CO2NH4	wä	GL	80																+	+	+	+	+	+			+
	C7H9NO2	wä	GL	100																+	+	+	+	+	+			+
1058	ammonium bromide	wä	GL	20	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
	NH4Br	wä	GL	80			+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
	H4BrN	wä	GL	100					+	+	+						+	+	+	+	+	+	+	+	+			+
1059	ammonium carbonate	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+					+	+		+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60	0								+				+	0	0	+	+		+		+			+
	(NH4)2CO3	wä	GL	80																+	+							+
	CH8N2O3	wä	GL	100																+	+							+
1060	ammonium chloride	wä	27% (GL)	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+
		wä	27% (GL)	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+
		wä	27% (GL)	60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	0	+	+
	NH4Cl	wä	27% (GL)	80			+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	-	+	+
	H4ClN	wä	27% (GL)	100			+	+	+	+	+		+	+			+	+	+	+	+	+	+	+		0	0	
1061	ammonium citrate		TR	20	+				+	+	+																	
	triammonium citrate		TR	40	+				+	+	+																	
	citric acid triammonium salt		TR	60	0				+	+	+																	
	H4NO2CCH2C(OH)(CO2NH4)CH2CO2NH4		TR	80					+	+	+																	
	C6H17N3O7		TR	100						+	+																	

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1062	ammonium dichromate	wä	GL	20	+	+	+	+	+	+	+			+			+	+	+	+	+		+	+	+	+	+	+
		wä	GL	40					+	+	+	+							+	+	+	+		+	+	+	+	+
		wä	GL	60						+	+	+									+	+		+	+	+	+	+
		wä	GL	80							+	+									+	+		+	+			+
		wä	GL	100																	+	+						
(NH4)2Cr2O7																												
H8Cr2N2O7																												
1063	ammonium fluoride	wä	GL	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+					+
		wä	GL	40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+					+
		wä	GL	60		+	+	+	+	+	+				+		0	+			+	+	+					+
		wä	GL	80			+		+	+	+				+			+			+	+						+
		wä	GL	100					+	+	+							+			+	+						
NH4F																												
H4FN									+	+	+						+			+	+							
1064	ammonium hexafluorosilicate	wä	GL	20	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	+		+
		wä	GL	40		+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	+		+
		wä	GL	60					+	+	+										+	+	+	+	+	+		+
		wä	GL	80					+	+	+										+	+	+					+
		wä	GL	100					+	+	+										+	+	+					+
(NH4)2SiF6																												
H8F6N2Si									+	+	+									+	+	+					+	
1065	ammonium formate	wä	GL	20	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+		+
		wä	GL	40		+	+	+	+	+	+			+							+	+	+	+	+	+		+
		wä	GL	60					+	+	+										+	+	+	+	+	+		+
		wä	GL	80					+	+	+										+	+	+					+
		wä	GL	100					+	+	+										+	+	+					+
formic acid ammonium salt																												
HCO2NH4									+	+	+									+	+	+					+	
CH5NO2								+	+	+										+	+	+					+	
1066	ammonium hydrogencarbonate	wä	GL	20	+	+	+	+		+	+			+	+	+	+			+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+		+	+			+	+	+	+			+	+	+	+	+	+	+	+	+
		wä	GL	60		+	+	+		+	+			+				+			+	+	+	+	+	+	+	+
ammonium bicarbonate																												
NH4HCO3																												
CH5NO3																												

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1067	ammonium hydrogensulfate	wä	GL	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+		+	+	+
	ammonium bisulfate	wä	GL	40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+		+	+	+
		wä	GL	60			+	+	+	+	+			+		0	+	+	+	+	+	+	+	+			+	+
	(NH4)HSO4	wä	GL	80					+	+	+							+	+	+	+	+	+	+				+
	H5NO4S	wä	GI	100						+	+									+	+	+						+
1068	ammonium hydrogensulfide	wä	VL	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+		+	+
	ammonium bisulfide	wä	VL	40	+				+	+	+					+	+	0	0	+	+	+	+	+	+		+	+
		wä	VL	60	+				+	+	+					+	+	0	0	+	+	+	+	+	+		+	+
	(NH4)HS	wä	VL	80					+	+	+							-	-	+	+	+	+	+	+			
	H5NS	wä	VL	100					+	+	+									+	+	+						
1069	ammonium molybdate	wä	GL	20	+	+	+	+		+	+			+	+		+	+	+	+	+	+	+	+	+			
	ammonium heptamolybdate	wä	GL	40		+	+	+		+	+			+	+		+	+	+	+	+	+	+	+	+			
		wä	GL	60						+	+									+	+	+	+	+	+			
	(NH4)6Mo7O24	wä	GL	80						+	+									+	+	+	+	+	+			
	H24Mo7N6O24	wä	GL	100						+	+																	

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+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																				
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor
1070 NH4NO3 H4N2O3	ammonium nitrate	wä 10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	60	0	0	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+
		wä 10%	80			0	0	+	+	+	+	0			+	+	+	+	+	+	+	+
		wä 10%	100					+	+	+								+	+	+		+
		wä 50%	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+
		wä 50%	40	+	+	+	+	+	+	+		+		0	+	+	+	+	+	+	+	+
		wä 50%	60	0	0	+	+	+	+	+		+		0		+	+	+	+	+	+	+
		wä 50%	80					+	+	+				0		+	+	+	+	+	+	+
		wä 50%	100						+	+				-				+	+	+		+
		wä GL	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+
		wä GL	60	0	0	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+
		wä GL	80			0	0	+	+	+	+	0				+	+	+	+	+	+	+
		wä GL	100					+	+	+								+	+	+		+
1071 oxalic acid diammonium salt (NH4)2C2O4 C2H8N2O4	ammonium oxalate	wä GL	20	+	+	+	+	+	+			+				+	+	+	+	+	+	+
		wä GL	40		+	+	+	+	+			+				+	+	+	+	+	+	+
		wä GL	60					+	+	+								+	+	+	+	+
		wä GL	80					+	+	+								+	+	+		+
		wä GL	100					+	+	+								+	+	+		+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																					
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301
1072 ammonium persulfate (NH4)2S2O8 H8N2O8S2	VL	20	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	
		40	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	
		60	+				+	+	+									+	+	+	+	+	+	
		80					+	+	+									+	+	+	+	+	+	
		100					+	+	+									+	+	+	+	+	+	
		20	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	
		40	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	
		60					+	+	+									+	+	+	+	+	+	
		80					+	+	+									+	+	+	+	+	+	
		100					+	+	+									+	+	+	+	+	+	
1073 ammonium hydrogenphosphate (NH4)2HPO4 H9N2O4P	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+	+
		80			+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+
		100			+	+	+	+	+			+			+	+	+	+	+	+				+
1074 ammonium thiocyanate ammonium rhodanide NH4SCN CH4N2S	GL	20	+	+	+	+	+	+	+			+	+			+	+	+	+	+	+	+	+	+
		40		+	+	+	+	+	+			+	+			+	+	+	+	+	+	+	+	+
		60		+	+	+	+	+	+			+						+	+	+	+	+	+	+
		80					+	+	+									+	+	+				+
		100					+	+	+									+	+	+				+
1075 ammonium sulfamate sulfamic acid ammonium salt NH2SO3NH4 H6N2O3S	GL	20	+	+	+	+	+	+	+		+	+	+		+			+	+	+	+	+	+	
		40	+	+	+	+	+	+	+		+	+	+		+			+	+	+	+	+	+	
		60		+	+	+		+	+		+	+			+			+	+	+	+	+	+	
		80			+	+		+	+		+	+			+			+	+	+	+	+	+	
		100						+	+									+	+					

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Chemical Resistance

Release Date: 2023-02-17

1076	ammonium sulfate																														
(NH4)2SO4 H8N2O4S	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
	wä	10%	60	0	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+	+	0	+	+	+		
	wä	10%	80			+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+	0	+	+	+		
	wä	10%	100					+	+	+						+	+	+	+	+	+	+		+	0	+	+	+	+		
	wä	43% (GL)	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	wä	43% (GL)	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	wä	43% (GL)	60	0	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	
	wä	43% (GL)	80			+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	
	wä	43% (GL)	100					+	+	+						+	+	+	+	+	+	+		+	0	+	+	+	+	+	

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Chemical Resistance

Release Date: 2023-02-17

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1077	ammonium sulfide	wä	10%	20	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+	+			+		
		wä	10%	40	+	+	+	+	+	+	+	+	+		+		+	0	0	+	+	+	+	+			+		
		wä	10%	60	0	+	+	+	+	+	+	+			+		+	+	-	-	+	+	+	+	+			+	
		wä	10%	80			+				+	+			+						+	+		+	+				
		wä	10%	100							+	+									+	+							
		wä	20%	20	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+	+			+	
		wä	20%	40	+	+	+	+	+	+	+	+	+		+		+	+	0	0	+	+	+	+	+			+	
		wä	20%	60	0	+	+	+	+	+	+	+				+		+	+	-	-	+	+	+	+	+			+
		wä	20%	80			+				+	+				+						+	+		+	+			
		wä	20%	100							+	+										+	+						
		wä	40%	20	+	+	+	+	+	+	+	+	-			+		+	+	+	+	+	+	+	+	+			+
		wä	40%	40	+	+	+	+	+	+	+	+	-			+		+	+	0	0	+	+	+	+	+			+
		wä	40%	60	0	+	+	+	+	+	+	+				+		+	+	-	-	+	+	+	+	+			+
		wä	40%	80							+	+										+	+		+	+			
		wä	40%	100							+	+										+	+						
		wä	GL	20	+	+	+	+	+	+	+	+	-			+		+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+	+	-			+		+	+	0	0	+	+	+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+	+				+		+	+	-	-	+	+	+	+	+			+
		wä	GL	80							+	+										+	+		+	+			
		wä	GL	100							+	+										+	+						

1078	amyl acetate		TR	20	-	+	0	0		+	+			0		-	0	0	0	0	+	+		+	+	+	+	+	+
			TR	40	-	+	-	-		+	+				-			-	-	-	+	+		+	+	+	+	+	+
			TR	60	-	+	-	-		+	+				-				-	-	+	+		+	+	+	+	+	+
			TR	80						+	+											+		+	+	+	+	+	+
			TR	100						+	+											+		+		+	+	+	+
			TR	120						+	+											+		+		+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																							
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1079 1-pentanol amyl alcohol CH3(CH2)4OH C5H12O	TR	20	+	+	+	+	+	+	+	-	+	+			0	+	+	+	+	+	+	+	+	+	+	+
	TR	40	+	+	+	+	+	+	+		0	+			0	+	+	+	+	+	+	+	+	+	+	+
	TR	60	0				+	+	+		0						+	+	+	+	+	+	+	+	+	+
	TR	80					+	+	+								+	+	+	+	+	+	+	+	+	+
	TR	100					+	+	+								+	+			+		+	+	+	+
	TR	120					0	+	+										+		+		+	+	+	+
1080 1-chloropentane 1-pentyl chloride CH3(CH2)4Cl C5H11Cl P	TR	20	-	0			+	+	+						-		+	+	+	+	+	+	+	+	+	+
	TR	40	-	-			+	+	+								+	+	+	+	+	+	+	+	+	+
	TR	60	-				+	+	+								+	+	+	+	+	+	+	+	+	+
	TR	80					+	+	+									+	+	+	+	+	+	+	+	+
	TR	100					+	+	+									+	+	+		+	+	+	+	+
	TR	120																								
1081 1-dodecanol 1-dodecyl ester CH3(CH2)10CO2C5H11 C17H34O2	TR	20	-					+	+								+	+	+	+	+	+	+	+	+	+
	TR	40						+	+								+	+	+	+	+	+	+	+	+	+
	TR	60						+	+								+	+	+	+	+	+	+	+	+	+
	TR	80						+	+									+	+	+	+	+	+	+	+	+
	TR	100						+	+									+	+	+		+	+	+	+	+
	TR	120						+	+									+		+		+	+	+	+	+
1082 p-tert-amyl phenol 4-(2-methyl-2-butyl)phenol CH3CH2C(CH3)2C6H4OH C11H16O	TR	20	-				-	+	+																	
	TR	40	-					+	+																	
	TR	60	-					+	+																	
	TR	80						+	+																	
	TR	100						+	+																	
	TR	120						+	+																	

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Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]																				
				PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor
1083	aniline																						
aminobenzene	wä	GL	20	-	0	0	0	+	+	+	-	-	0		0	+	+	0	+	+	+	+	+
phenylamine	wä	GL	40	-	0	0	0	+	+	+			0		-	+	0	0	+	+	+	+	+
C6H5NH2	wä	GL	60	-					+	+					-		-	-	+	+	+	+	+
C6H7N	wä	GL	80						+	+									+	+	+	+	+
	wä	GL	100						+	+									+	+	+	+	+
		TR	20	-	0	0	0	+	+	+		-	0		-	-	+	+	+	+	+	+	+
		TR	40	-	0	0	0	0	+	+			0				0	0	+	+	+	+	+
		TR	60						+	+					-		-	-	+	+	+	+	+
		TR	80						+	+									+	+	+	+	+
		TR	100						+	+									+	+	+	+	+
		TR	120						+	+									+	+	+	+	+
1084	aniline sulfate																						
anilinium sulfate		TR	20	-					+	+													
		TR	40						+	+													
		TR	60						+	+													
(C6H5NH3)2SO4		TR	80						+	+													
C12H16N2O4S		TR	100						+	+													
1085	aniline sulfite																						
anilinium sulfite		TR	20	+					+	+													
		TR	40						+	+													
		TR	60						+	+													
(C6H5NH3)2SO3		TR	80						+	+													
C12H16N2O3S		TR	100						+	+													

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1086	p-anisaldehyde	TR	20	-				+	+		-							+	+	+
		TR	40	-				+	+									+	+	+
		TR	60	-				+	+									+	+	+
		TR	80					+	+									+	+	+
		TR	100					+	+									+	+	+
1087	anisole	TR	20	-	0	0	0		+	+	-	0		-	-	-	-	+	+	+
		TR	40	-	-	-	-		+	+		-						+	+	+
		TR	60	-	-	-	-		+	+		-						+	+	+
		TR	80						+	+								+	+	+
		TR	100						+	+								+	+	+
		TR	120															+	+	+
1088	anise oil		20		0				+	+										
			40		0				+	+										
			60		-				+	+										
			80						+	+										
			100						+	+										
1089	sodium thiosulfate	wä	40% (GL)	20	+	+	+	+	+	+			+	+	+	+	+	+	+	+
		wä	40% (GL)	40	+	+	+	+	+	+			+	+	0	+	+	+	+	+
		wä	40% (GL)	60	0	+	+	+	+	+			+		-	+	+	+	+	+
		wä	40% (GL)	80					+	+	+					+	+	+	+	+
		wä	40% (GL)	100					+	+	+					+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Condition	Concentration	Temperature [°C]	Hast-C 2,4537 V4A 1,4571 V2A 1,4301 ZrO2 Al2O3 Sensor Al2O3 Carbon SSIC FFKM FKM+ FKM = FPM EPDM NBR HG1 PEEK PSU PA12 FEP, PFA PTFE PVDF PP-GF30 PP PE PVC-U																							
1090 C6H5CH=NOH C7H7NO	benzaldehyde oxime	wä	2%	20	+	+			+	+	+							+	+					+	+	
		wä	2%	40						+	+	+							+	+					+	+
		wä	2%	60						+	+	+							+	+					+	+
		wä	2%	80						+	+	+							+	+					+	+
		wä	2%	100						+	+	+							+	+					+	+
1091 antimony(V) chloride SbCl5 Cl5Sb	antimony pentachloride		TR	20	+	+			+	+	+	-	-						+	+				-	-	+
			TR	40					+	+	+								+	+						
			TR	60					+	+	+								+							
			TR	80					+	+	+															
			TR	100					+	+	+															
			TR	120						+	+															
1092 antimony(III) chloride SbCl3 Cl3Sb	antimony trichloride	wä	90%	20	+	+	+		+	+	+	-	+	+		+	+	+	+					-	-	
		wä	90%	40	+	+	+		+	+	+		+	+		+	+	+	+							
		wä	90%	60	+	+	+		+	+	+		+	+		+	+	+	+							
		wä	90%	80						+	+															
		wä	90%	100						+	+															
1093 hydroxysuccinic acid hydroxybutanedioic acid HO2CCH2CH(OH)CO2H C4H6O5	malic acid	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	GL	40		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	GL	60		+	+	+	+	+	+	+		+		+	+	+	+	+	+	+		+	+	
		wä	GL	80					+	+	+								+	+	+			+	+	
		wä	GL	100					+	+	+								+	+	+			+	+	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1094	arsenious acid	wä	VL	20	+			+	+	+									+	+	+	+	+	+			+	
		wä	VL	40						+	+									+	+	+	+	+	+			+
		wä	VL	60						+	+									+	+	+	+	+	+			+
		wä	VL	80						+	+									+	+	+	+	+	+			
		wä	VL	100						+	+									+	+	+	+					
1095	arsenic acid	wä	80%	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		+	+
		wä	80%	40	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+	+	+		+	+
		wä	80%	60	0	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+		+	+
		wä	80%	80	-		+		+	+	+			+		0	+	+	+	+	+	+	+	+	+		+	+
		wä	80%	100			0		+	+	+			0				+	+	+	+	+					+	+
		wä	80%	120						+	+																	
1096	arsenic sulfides		TR	20	+				+	+	+																	
			TR	40					+	+	+																	
			TR	60					+	+	+																	
			TR	80					+	+	+																	
			TR	100					+	+	+																	
			TR	120						+	+																	
1097	arsenic trioxide		TR	20	+				+	+	+																	
			TR	40					+	+	+																	
			TR	60					+	+	+																	
			TR	80					+	+	+																	
			TR	100					+	+	+																	
			TR	120						+	+																	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

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Chemical Resistance

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1098 vitamin C C6H8O6	L(+)-ascorbic acid	wä 24% (GL) 20	+	+	+	+	+	+	+			+	+		+	+	+	+	+	+	+	+	+			+
		wä 24% (GL) 40	+	+	+	+	+	+	+	+			+	+					+	+	+	+	+			+
		wä 24% (GL) 60	0		+	+			+	+			+	+					+	+	+	+	+			+
1099 NH4H2PO4 H6NO4P	ammonium dihydrogenphosphate	wä GL 20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+			
		wä GL 40	+	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+			
		wä GL 60		+	+	+	+	+	+			+	+		-	+	+	+	+	+	+	+	+			
		wä GL 80			+	+	+	+	+				+			+	+	+	+	+		+	+			
		wä GL 100					+	+	+										+	+						
1100 BaCO3 CBaO3	barium carbonate	wä GL 20	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+	+	+		+	+
		wä GL 40	+	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+		+	+
		wä GL 60		+	+	+	+	+	+				+		+	+	+	+	+	+		+	+		+	+
		wä GL 80					+	+	+						-	+	+	+	+	+		+	+			+
		wä GL 100					+	+	+										+	+						+
1101 BaCl2	barium chloride	wä GL 20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä GL 40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä GL 60	0	+	+	+	+	+	+		+	+	+	+	0	+	+	+	+	+	+	+	+			+
		wä GL 80			+	+	+	+	+			+	+	+	-	+	+	+	+	+	+	+	+			+
		wä GL 100					+	+	+										+	+	+					+
1102 Ba(CN)2 C2BaN2	barium cyanide	wä GL 20	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+	+	+	+	+		+	+
		wä GL 40	+	+	+	+		+	+		+	+		0	+	0	0	+	+	+	+	+	+		+	+
		wä GL 60		+	+			+	+			+			-	+	-	-	+	+	+	+	+		+	+
		wä GL 80						+	+										+	+	+					+
		wä GL 100						+	+											+	+					+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1110	benzal chloride	TR	20	-				+	+	-	-							+	+	+
		TR	40	-				+	+									+	+	+
		TR	60	-				+	+									+	+	+
		TR	80					+	+									+	+	+
		TR	100					+	+									+	+	+
		TR	120					+	+									+	+	+
1111	benzaldehyde	wä	GL	20	-	+	+	+	+	+	-	+	0		+	+	+	+	+	+
		wä	GL	40	-	+	+	+	+	+		+	0		+	+	+	+	+	+
		wä	GL	60	-	+	0	0	+	+		0	0		+	+	+	+	+	+
		wä	GL	80				+	+							+	+	+	+	+
		wä	GL	100				+	+							+	+	+		+
1112	benzamide	wä	GL	20	+	+	+	+	+	+		+					+	+	+	+
		wä	GL	40	+	+	+	+	+	+		+					+	+	+	+
		wä	GL	60	0	+	+	+	+	+		+					+	+	+	+
		wä	GL	80				+	+								+	+	+	+
		wä	GL	100				+	+								+	+	+	+
1113	gasoline, free of lead and aromatics		20	+	+	0	0	+	+	+	+	0		+	-	+	+	+	+	+
			40	+	+	0	0	+	+	+	+	0		+		+	+	+	+	+
			60	+	0	-	-	+	+	+		-				+	+	+	+	+
			80			-	-	+	+	+		-					+	+	+	+
			100					+	+	+							+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1114	gasoline, Super	20	+	+	0	0	+	+	+	+	0	0		+	-	+	+	+	+	+
		40	+	+	0	0	+	+	+			0				+	+	+	+	+
		60		0	-	-	+	+	+							+	+	+	+	+
		80					+	+	+								+	+	+	+
		100					+	+	+								+	+	+	+
1115	petrol-benzene mixture	20	-	0	0	0		+	+		-	0		+	-	+	+	+	+	+
		40	-	-	-	-		+	+			-				+	+	+	+	+
		60	-	-	-	-		+	+			-				+	+	+	+	+
		80						+	+								+	+	+	+
		100						+	+								+	+	+	+
1116	benzoic acid benzenecarboxylic acid phenylformic acid C6H5CO2H C7H6O2	20	+	+	+	+		+	+	-	-	+		-	-	+	+	+	+	+
		40	+	+	+	+		+	+	-		+				+	+	+	+	+
		60	0	+	+	+		+	+			+				+	+	+	+	+
		80			+	+		+	+			+				+	+	+	+	+
		100						+	+							0	0	+	+	+
1117	benzene C6H6	20	-	0	0	0	+	+	+		-	0		0	-	+	+	+	+	+
		40		-	-	-	+	+	+			-					+	+	+	+
		60					0	+	+								+	+	+	+
		80					-	+	+								+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1118benzoic anhydride (C6H5CO)2O C14H10O3	TR	20	+	+	+	+	+	+	+	+	+	+	+													
	TR	40			+	+	+	+	+			+														
	TR	60			+	+	+	+	+			+														
	TR	80						+	+																	
	TR	100						+	+																	
1119sodium benzoate benzoic acid sodium salt C6H5CO2Na C7H5NaO2	wä	GL	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+		0	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80				+	+	+						0	0	0	+	+	+	+	+				+
	wä	GL	100				0	+	+									+	+	+						+
1120benzenesulfonic acid phenylsulfonic acid C6H5SO3H C6H6O3S	wä	10%	20	+	+	+	+	+	+			+		0				+	+	+	+	+	+			+
	wä	10%	40	+	+	+	+	+	+			+		-				+	+	+	+	+	+			+
	wä	10%	60	+	+	+	+		+	+		+						+	+	+	+	+	+			
	wä	10%	80					+	+									+	+	+	+	+	+			
	wä	10%	100					+	+										+							
	wä	40%	20	+	+	+	+	+	+			+		0				+	+	+	+	+	+			+
	wä	40%	40	+	+	+	+	+	+			+		-				+	+	+	+	+	+			+
	wä	40%	60	+	+	+	+		+	+		+						+	+	+	+	+	+			
	wä	40%	80					+	+									+	+	+	+	+	+			
	wä	40%	100					+	+										+							
	wä	GL	20		+	+	+	+	+			+		0				+	+	+	+	+	+			+
	wä	GL	40		+	+	+	+	+			+		-				+	+	+	+	+	+			+
	wä	GL	60		+	+	+		+	+		+						+	+	+	+	+	+			
	wä	GL	80					+	+									+	+	+	+	+	+			
	wä	GL	100					+	+										+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1125	succinic acid	wä	GL	20	+	+	+	+	+	+	+	-		+		-	+	+	+	+	+	+	+	+	+	+	+	+
	butanedioic acid	wä	GL	40	+	+	+	+	+	+	+	-		+		-	+	+	+	+	+	+	+	+	+	+	+	+
	ethane-1,2-dicarboxylic acid	wä	GL	60	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	+
	HO2CCH2CH2CO2H	wä	GL	80						+	+									+	+	+				+	+	+
	C4H6O4	wä	GL	100						+	+										+	+				+	+	+
1126	beryllium chloride	wä	GL	20	+	+	+	+		+	+			+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+		+	+			+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+		+	+			+						+	+	+	+	+	+			+
		wä	GL	80						+	+									+	+	+	+	+	+			+
	BeCl2	wä	GL	100						+	+									+	+	+						+
1127	beryllium fluoride	wä	GL	20	+	+	+	+		+	+			+						+	+	+	+	+	+			+
		wä	GL	40						+	+									+	+	+	+	+	+			+
		wä	GL	60						+	+									+	+	+	+		+			+
		wä	GL	80						+	+									+	+							+
	BeF2	wä	GL	100						+	+									+	+							
1128	beryllium sulfate	wä	GL	20	+	+	+	+	+	+	+		+	+	+		+	+	+	+								
		wä	GL	40	+	+	+	+	+	+	+		+	+	+		+	+	+	+								
		wä	GL	60	+	+	+	+	+	+	+			+			+	+	+	+								
	BeSO4	wä	GL	80			+	+	+	+	+			+			+	+	+	+								
	BeO4S	wä	GL	100					+	+	+									+								
1129	beer			20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+
				60	+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+	+	+
				80			+	+	+	+	+		+	+				+	+	+	+	+	+	+	+	+	+	+
				100						+	+									+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1130	beer colour	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		80						+	+									+	+	+
		100						+	+									+	+	+
		120						+	+									+	+	+
1132	hydrogen cyanide hydrocyanic acid HCN CHN	20	+	+	+	+	+	+	+			+		0	0	+	+	+	+	+
		40	+	+	+	+	+	+	+			+		-	-	0	0	+	+	+
		60	0	+	+	+	+	+	+			+						+	+	+
		80					+	+	+									+	+	+
		100					+	+	+									+	+	+
		120						+	+									+	+	+
1133	lead(II) acetate (CH ₃ COO) ₂ Pb C ₄ H ₆ O ₄ Pb	wä 10%	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
		wä 10%	40	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
		wä 10%	60	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+
		wä 10%	80				+	+	+									+	+	+
		wä 10%	100				+	+	+									+	+	+
		wä GL	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
		wä GL	60	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		wä GL	80				+	+	+									+	+	+
		wä GL	100				+	+	+									+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1134 lead(II) hydrogenarsenate lead arsenate PbHAsO ₄ HAsPbO ₄	GL	20	+	+	+	+	+	+	+			+								
		40						+	+											
		60						+	+											
		80						+	+											
		100						+	+											
1135 lead(II) carbonate PbCO ₃ CO ₃ Pb	GL	20	+	+	+	+		+	+			+		+	+	+	+	+	+	+
		40	+	+	+	+		+	+			+		+	+	+	+	+	+	+
		60		+	+	+		+	+			+		+	+	+	+	+	+	+
		80						+	+					+	+	+	+	+	+	+
		100						+	+								+	+	+	+
1137 lead(II) chloride PbCl ₂ Cl ₂ Pb	GL	20	+	+	+	+	+	+	+		+	+	+			+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+			+	+	+	+	+
		60		+	+	+	+	+	+		+	+				+	+	+	+	+
		80			+	+	+	+	+		+	+				+	+	+	+	+
		100					+	+	+								+	+	+	+
1138 lead(II) nitrate Pb(NO ₃) ₂ N ₂ O ₆ Pb	GL	20	+	+	+	+	+	+	+		+	+				+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+				+	+	+	+	+
		60	+	+	+	+	+	+	+			+				+	+	+	+	+
		80					+	+	+								+	+	+	+
		100					+	+	+								+	+	+	+
1139 lead(II) sulfate PbSO ₄ O ₄ PbS	GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+
		80			+	+	+	+	+			+		+	+	+	+	+	+	+
		100						+	+								+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
H3BO3	boric acid	wä VL 20	+	+	+	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä VL 40	+	+	+	+	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	+	+	+	
		wä VL 60	0	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	
		wä VL 80			+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+	+	
		wä VL 100					+	+	+	+							+	+	+	+	+					+	
		wä GL 20	+	+	+	+	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL 40	+	+	+	+	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL 60	0	+	+	+	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL 80			+	+			+	+		+	+			+	+	+	+	+	+	+	+	+	+	+	+
wä GL 100							+	+		+					+	+	+	+	+				+	+	+		
BCl3	boron trichloride	gf TR, GK 20	+					+	+									+									
		gf TR, GK 40						+	+									+									
		gf TR, GK 60						+	+									+									
		gf TR, GK 80						+	+																		
		gf TR, GK 100						+	+																		
BF3	boron trifluoride	gf TR, GK 20	+	+			+	+	+									+									
		gf TR, GK 40	+	+			+	+	+									+									
		gf TR, GK 60		-			+	+	+										+								
		gf TR, GK 80					+	+	+																		
		gf TR, GK 100					+	+	+																		
ClCH2CH2Br C2H4BrCl	1-bromo-2-chloroethane	TR 20	-	-	-	-	+	+	+			-			-			+	+		+	+	+	+	+	+	
		TR 40						+	+									+	+		+	+	+	+	+	+	
		TR 60						+	+									+	+		+	+	+	+	+	+	
		TR 80						+	+										+		+	+	+	+	+	+	
		TR 100						+	+										+		+		+	+	+	+	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

1147			bromoethane																								
ethyl bromide		TR	20	-	0	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
		TR	40	-	0	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
				-	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
				-	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
CH3CH2Br						-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
C2H5Br			P			-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-

1148			bromine																								
Br2	gf	TR, GK	20	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
	gf	TR, GK	40	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
	gf	TR, GK	60	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
	gf	TR, GK	80	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
	gf	TR, GK	100	-	-	-	-	-	0	+	+	-	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-
	wä	GL	20	+	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	+	-	+	+	+	-	-	-
	wä	GL	40	0	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	+	-	+	+	+	-	-	-
	wä	GL	60	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	+	-	+	+	+	-	-	-
	fl	TR	20	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	+	-	+	+	+	-	-	-
	fl	TR	40	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	+	-	+	+	+	-	-	-

1149			bromoform																								
tribromomethane		TR	20	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TR	40	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TR	60	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TR	80	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CHBr3		TR	100	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TR	120	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1151	hydrobromic acid	wä	10%	20	+	+	+	+	+	+	+	-	+	+		-	+	+	+	+	+	+	+	+	+	-	-	-	
		wä	10%	40	+	+	+	+	+	+	+		+	+	+		-	+	+	+	+	+	+	+	+				
		wä	10%	60	+	+	+		+	+	+	+			+			0	+	+	+	+	+	+	+				
		wä	10%	80						+	+	+									+	+	+	+	+				
		wä	10%	100						+	+	+																	
		wä	48%	20	+	+	+	+	+	+	+	+	-	-	+		-	+	+	+	+	+	+	+	+	+	-	-	
		wä	48%	40	+	+	+		+	+	+	+			+		-	+	+	+	+	+	+	+	+				
		wä	48%	60	+	+	0		+	+	+	+			0			0	+	+	+	+	+						
		wä	48%	80						+	+	+						-	0	0	+	+	+						
		wä	48%	100						+	+	+							-	-									
1152	1,3-butadiene	gf	TR, GK	20	+	0	0	0	+	+	+			0		-	-	0	0	+						+	+		
		gf	TR, GK	40	+	-	-	-	+	+	+				-					+						+	+		
		gf	TR, GK	60	0				+	+	+										+					+	+		
		gf	TR, GK	80					+	+	+																		
		gf	TR, GK	100					+	+	+																		
1153	1,4-butanediol	wä	10%	20	+	+	+	+		+	+	-		+			+	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	40	0	+	+	+		+	+				+			+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	60	-	+	+	+			+	+			+			+			+	+	+	+	+	+	+	+	
		wä	10%	80							+	+									+	+	+	+	+	+	+	+	
		wä	10%	100							+	+										+	+	+		+	+	+	
			TR	20	0	+	+	+			+	+	-		+			+	+	+	+	+	+	+	+	+	+	+	
			TR	40	-	+	+	+			+	+			+			+	+	+	+	+	+	+	+	+	+	+	
			TR	60		+	+	+			+	+			+			+			+	+	+	+	+	+	+	+	
			TR	80							+	+									+	+	+			+	+	+	
			TR	100							+	+										+	+			+	+	+	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

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Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1154	gf	butane	20	+	+	+	+	+	+	+			+		+	-	+	+	+	+					+	+	+	
			40			+	+	+	+	+	+			+						+					+	+	+	
			60			+	+	+	+	+	+			+						+						+	+	+
			80								+	+								+						+	+	+
			100							+	+									+						+	+	+
C4H10																												
1155		1-butanol	20	+	+	+	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	
			40	+	+	+	+	+	+	+			+		+	+				+	+	+	+	+	+	+	+	
			60	0	+	0	0	+	+	+			0		-	+				+	+	+	+	+	+	+	+	
			80			0	0	+	+	+			0			0				+	+	+	+	+	+	+	+	
			100					0	+	+										+	+	+	+		+	+	+	+
butyl alcohol CH3(CH2)3OH C4H10O																												
1156		1-butanethiol	20	+	0	+	+	+	+	+			+		+	+	+	+		+	+	+	+	+	+	+	+	
			40	+	0	0	0	+	+	+			0		+	+	+	+		+	+	+	+	+	+	+	+	
			60	+	-			+	+	+					+	0	0	0		+	+	+	+	+	+	+		
			80					+	+	+										+	+	+	+	+	+	+		
			100						+	+											+	+	+		+	+	+	
1-butyl mercaptan CH3(CH2)3SH C4H10S																												
1157	gf	1-butene	20	+	-	-	-	+	+	+			-		+	0	+	+							+	+	+	
			40		-	-	-	+	+	+				-											+	+	+	
			60			-	-	+	+	+				-											+	+	+	
			80			-	-	+	+	+				-											+	+	+	
			100			-	-	+	+	+				-											+	+	+	
butylene CH3CH2CH=CH2 C4H8																												
1158	gf	1-butyne	20		+				+	+						-												
			40		+				+	+																		
			60						+	+																		
			80						+	+																		
			100						+	+																		
CH3CH2CCH C4H6																												

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+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1159butyric acidbutanoic acidCH3CH2CH2CO2HC4H8O2	wä	20%	20	+	+	+	+	+	+	+			+		-	+	0	0	+	+	+	+	+	+	+	+	+		
	wä	20%	40	0	+			+	+	+									+	+	+	+	+	+	+	+	+		
	wä	20%	60	-	0			+	+	+									+	+	+	+	+	+	+	+	+		
	wä	20%	80					+	+	+										+	+	+	+	+	+	+	+		
	wä	20%	100					+	+	+										+					+	+	+		
		TR	20	+	+	+	+	+	+	+				+		-	0	0	0	+	+	+	+	+	+	+	+	+	
		TR	40	0	+			+	+	+										+	+	+	+	+	+	+	+	+	
		TR	60	-	0			+	+	+										+	+	+	+	+	+	+	+	+	
		TR	80					+	+	+											+	+	+		+	+	+	+	+
		TR	100					0	+	+											+					+	+	+	+

1160butyl acetateacetic acid butyl esterCH3CO2(CH2)3CH3C6H12O2		TR	20	-	0	0	0	+	+	+	-	-	0		-	-	-	-	+	+		+	+	+	+	+	+	+
	TR	40		-	-	-	+	+	+			-						+	+		+	+	+	+	+	+	+	
	TR	60						+	+									+	+		+	+	+	+	+	+	+	
	TR	80						+	+										+		+	+	+	+	+	+	+	
	TR	100						+	+										+		+		+	+	+	+	+	
1161butylamine1-aminobutaneCH3(CH2)3NH2C4H11N		TR	20					+	+	+	-				-		-	-	+	+	+	+	+	+	+	+	+	+
	TR	40					0	+	+									+	+	+	+	+	+	+	+	+	+	
	TR	60					-	+	+									+	+	+	+	+	+	+	+	+	+	
	TR	80						+	+										+	+				+	+	+	+	
1162butyl bromide1-bromobutaneCH3(CH2)3BrC4H9Br		TR	20	-	-	-	-	+	+	+	-	-	-		-	-			+	+	+	+	+	+	+	+	+	+
	TR	40					+	+	+									+	+	+	+	+	+	+	+	+	+	
	TR	60					+	+	+									+	+	+	+	+	+	+	+	+	+	
	TR	80					+	+	+									+	+	+	+	+	+	+	+	+	+	
	TR	100					+	+	+										+		+		+	+	+	+	+	

P

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	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1163butyl chloride 1-chlorobutane CH3(CH2)3Cl C4H9Cl P		TR	20	-				+	+	+						-						+	+	+			
		TR	40					+	+	+												+	+	+			
		TR	60					+	+	+												+	+	+			
		TR	80					+	+	+												+	+	+			
		TR	100					+	+	+																	
		TR	120						+	+																	
11644-tert-butylphenol (CH3)3CC6H4OH C10H14O		TR	20	0	0	+	+	+	+	+			+		-	-	0	0									+
		TR	40	-				+	+	+																	
		TR	60					+	+	+																	
		TR	80					+	+	+																	
		TR	100						+	+																	
		TR	120						+	+																	
1165butyl phosphate phosphoric acid butyl ester C4H9OPO(OH)2 C4H11O4P		TR	20	-				-	+	+										+		+	+	+			
		TR	40						+	+										+		+	+	+			
		TR	60						+	+										+		+	+	+			
		TR	80						+	+										+		+	+	+			
		TR	100						+	+										+		+		+			
		TR	120						+	+										+		+		+			
1166cadmium acetate (CH3CO2)2Cd C4H6CdO4	wä	GL	20	+	+	+	+		+	+			+						+	+	+	+	+	+			+
	wä	GL	40	+	+	+	+		+	+			+						+	+	+	+	+	+			+
	wä	GL	60		+	+	+		+	+			+						+	+	+	+	+	+			+
	wä	GL	80						+	+									+	+	+	+	+	+			+
	wä	GL	100						+	+										+	+						+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537		
CdCl2	1167	wä	cadmium chloride	20	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
				40	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	
				60	0	+	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+
				80					+	+	+	+	+			0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
				100							+	+	+	+						0	+	+	+	+	+			+	+	+
Cd(CN)2 C2CdN2	1168	wä	cadmium cyanide	20	+	+	+	+	-	+	+			+			+				+	+	+	+	+	+				
				40	+	+	+	+	-	+	+			+								+	+	+	+	+	+			
				60		+	+			+	+			+								+	+	+	+		+			
				80						+	+											+	+	+						
				100						+	+												+							
CdSO4 CdO4S	1169	wä	cadmium sulfate	20	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+			+	
				40	+	+	+	+	+	+	+		+	+	+				+	+	+	+	+	+	+	+	+			+
				60	0	+	+	+	+	+	+		+	+								+	+	+	+	+	+			+
				80					+	+	+											+	+	+	+	+	+			+
				100						+	+											+	+	+						+
(CH3CO2)2Ca C4H6CaO4	1170	wä	calcium acetate	20	+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+			+	
				40	+	+	+	+	+	+	+		+	+					+			+	+	+	+	+	+			+
				60		+	+	+	+	+	+			+						+			+	+	+	+	+			+
				80					+	+	+											+	+	+	+	+	+			+
				100					+	+	+											+	+	+						+
calcium othoarsenate Ca3(AsO4)2 As2Ca3O8	1171	wä	calcium arsenate	20	+	+	+	+	+	+	+		+	+			+			+	+	+	+	+	+	+			+	
				40	+	+	+	+	+	+	+		+	+					+			+	+	+	+	+	+			+
				60		+	+		+	+	+			+						+			+	+	+	+	+			+
				80					+	+	+											+	+	+						+
				100						+	+											+	+	+						+

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Condition	Concentration	Temperature [°C]																										
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537		
1172 calcium benzoate benzoic acid calcium salt (C6H5CO2)2Ca C14H10CaO4	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1173 calcium bromide CaBr2 Br2Ca	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1174 calcium carbide calcium acetylide carbide CaC2 C2Ca		TR	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1175 calcium carbonate lime CaCO3 CCaO3	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1176	calcium chlorate	wä	GL	20	+	+	+	+	+	+	+			+						+	+	+	+	+	+			
		wä	GL	40	+	+	+	+	+	+	+				+					+	+	+	+	+	+			
		wä	GL	60	+	+	+	+	+	+	+				+						+	+	+	+	+			
		wä	GL	80					+	+	+									+		+						
		wä	GL	100						+	+	+																
Ca(ClO3)2																												
CaCl2O6																												
1177	calcium chloride	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+
		wä	GL	60	0	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	-	-	+
		wä	GL	80			+	+	+	+	+			+	+	+	0	+	+	+	+	+	+	+	+			+
		wä	GL	100					+	+	+			+				0	+	+	+	+	+	+		+		+
CaCl2																												
1178	calcium chromate	wä	GL	20	+					+	+										+	+	+	+	+	+		
		wä	GL	40						+	+										+	+	+	+	+	+		
		wä	GL	60						+	+										+	+	+	+	+	+		
		wä	GL	80						+	+										+	+	+	+	+	+		
		wä	GL	100						+	+										+	+	+	+		+		
chromatite																												
CaCrO4																												
1179	calcium fluoride	wä	GL	20	+	+	+	+	+	+	+		+	+				+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+			+	+			+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+			+	+			+	+	+	+	+	+	+	+			+
		wä	GL	80					+	+	+										+	+	+					
		wä	GL	100						+	+										+	+	+					
fluorspar																												
CaF2																												
1180	calcium hydrogencarbonate	wä	GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+			+	+	+	0	0	+	+	+	+	+	+	+			+
		wä	GL	80			+		+	+	+				+	+					+	+	+	+	+	+		+
		wä	GL	100						+	+										+	+	+					+
calcium bicarbonate																												
Ca(HCO3)2																												
C2H2CaO6																												

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1181	calcium hydrosulfide	wä	GL	20	+	+	+	+	+	+	+			+						+	+	+	+	+	+			+
		wä	GL	40		+	+	+	+	+	+	+			+						+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+	+			+						+	+	+	+	+			+
		wä	GL	80						+	+	+									+	+	+	+	+			
		wä	GL	100						+	+	+									+	+	+					
Ca(SH)2																												
H2CaS2																												
1182	calcium hydroxide	wä	GL	20	+	+	+	+	0	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	0	+	+		+	+		+	+	0	0	+	+	+	+	+	+	+	+	+
		wä	GL	60	+	+	+	+	0	+	+		+	+		0	+	0	0	+	+	+	+	+	+	+	+	+
		wä	GL	80			+		-	+	+			+				+	0	0	+	+	+		+	+	+	+
		wä	GL	100					-	+	+								0	0	+	+	+					+
lime milk																												
slaked lime																												
Ca(OH)2																												
H2CaO2																												
1184	calcium nitrate	wä	50%	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+		+	+
		wä	50%	40	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	0	+	
		wä	50%	60		+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+			+
		wä	50%	80					+	+	+		+						+	+	+	+	+	+	+			+
		wä	50%	100					+	+	+										+	+	+					+
Ca(NO3)2																												
CaN2O6																												
1185	calcium oxalate	wä	GL	20	+					+	+												+	+	+			
		wä	GL	40						+	+												+	+	+			
		wä	GL	60						+	+												+	+	+			
		wä	GL	80						+	+												+	+	+			
		wä	GL	100						+	+																	
oxalic acid calcium salt																												
CaC2O4																												
C2CaO4																												
1186	calcium permanganate	wä	VL	20	+					+	+																	
		wä	VL	40						+	+																	
		wä	VL	60						+	+																	
		wä	VL	80						+	+																	
		wä	VL	100						+	+																	
Ca(MnO4)2																												
CaMn2O8																												

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1187	calcium peroxide	wä	GL	20	+					+	+																	
		wä	GL	40	+					+	+																	
		wä	GL	60	+					+	+																	
		wä	GL	80						+	+																	
		wä	GL	100						+	+																	
CaO2																												
1188	calcium dihydrogenphosphate	wä	GL	20	+	+	+	+	+	+	+		+	+				+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+				+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+			+					+	+	+	+	+	+	+			+
		wä	GL	80					+	+	+									+	+	+	+	+	+			+
		wä	GL	100					+	+	+									+	+	+						+
Ca(H2PO4)2 H4CaO8P2																												
1189	calcium sulfate	wä	GL	20	+	+	+	+	+	+	+		+	+	+			+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+	+			+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+			+	+	+			+	+	+	+	+	+	+			+
		wä	GL	80			+	+	+	+	+			+	+				+	+	+	+	+	+	+			+
		wä	GL	100					+	+	+										+	+	+	+		+		
gypsum CaSO4 CaO4S																												
1190	calcium sulfide	wä	GL	20	+	+	+	+	0	+	+			+							+	+	+	+	+			+
		wä	GL	40	+	+	+	+	0	+	+			+							+	+	+	+	+			+
		wä	GL	60		+	+	+		+	+			+							+	+		+	+			+
		wä	GL	80						+	+										+	+						
		wä	GL	100						+	+										+	+						
CaS																												
1191	calcium sulfite	wä	GL	20	+	+	+	+	+	+	+			+					+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+			+					+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+			+					+	+	+	+	+	+	+			+
		wä	GL	80					+	+	+										+	+	+	+	+			+
		wä	GL	100						+	+										+	+	+					+
CaSO3 CaO3S																												

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+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1192	calcium hydrogensulfite	wä	GL	20	+	+	+	+		+	+			+				+	+	+	+	+	+	+			+	
	calcium bisulfite	wä	GL	40	+	+	+	+		+	+			+				+	+	+	+	+	+	+			+	
		wä	GL	60		+	+	+		+	+			+							+	+	+	+			+	
	Ca(HSO3)2	wä	GL	80						+	+									+	+	+	+	+			+	
	H2CaO6S2	wä	GL	100						+	+									+	+	+	+				+	
1193	(+/-)-camphor		TR	20	-	-	0	0	+	+	+			0				-	+	+	+					+	+	+
			TR	40					+	+	+									+	+					+	+	+
			TR	60					+	+	+										+					+	+	+
	C10H16O		TR	80						+	+										+					+	+	+
			TR	100						+	+										+					+	+	+
1194	camphor oil			20	-	-	-	-	+	+	+			-		-	-	+	+	+	+	+	+	+	+	+	+	+
				40					+	+	+									+	+	+	+	+	+	+	+	+
				60						+	+										+	+	+	+	+	+	+	+
				80						+	+										+	+	+	+	+	+	+	+
				100						+	+										+	+	+	+	+	+	+	+
1195	e-caprolactam		TR	20																			+	+	+			
	hexahydro-2H-azepin-2-one		TR	40																			+	+	+			
			TR	60																			+	+	+			
			TR	80																								
	C6H11NO																											
1196	e-caprolactone		TR	20	-					+	+										+		+	+	+	+	+	+
	6-hydroxyhexanoic acid lactone		TR	40						+	+										+		+	+	+	+	+	+
	6-hexanolide		TR	60						+	+										+		+	+	+	+	+	+
			TR	80						+	+										+		+	+	+	+	+	+
	C6H10O2		TR	100						+	+										+		+		+	+	+	+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1197	carbazole		TR	20		+	+	+		+	+			+									+	+	+			
dibenzo[b,d]pyrrole 9-azafluorene C12H9N			TR	40		+	+	+		+	+			+									+	+	+			
			TR	60		+	+	+		+	+			+									+	+	+			
			TR	80						+	+																	
			TR	100						+	+																	
1199	carbon disulfide		TR	20	0	0	-	-	+	+	+	+	-	-		-	-	+	+	+	+	+	+	+	+	+	+	+
CS2 P			TR	40	-	-	-	-	+	+	+	0		-						+	+	+	+	+	+	+	+	+
1200	Caro's acid	wä	VL	20	+	-	-	-	+	+	+			-	-					+	+		+	+	+			
peroxosulfuric acid	wä	VL	40							+	+									+	+		+	+	+			
peroxomonosulfuric acid	wä	VL	60							+	+									+	+		+	+	+			
H2SO5	wä	VL	80							+	+										+		+	+	+			
H2O5S	wä	VL	100							+	+										+							
1201	quinine	wä	GL	20	+	+	+	+		+	+			+									+	+	+			
C20H24N2O2	wä	GL	40		+	+	+			+	+			+									+	+	+			
	wä	GL	60		+	+	+			+	+			+									+	+	+			
	wä	GL	80							+	+																	
	wä	GL	100							+	+																	
1202	quinoline		TR	20	-	-	-	-	-	+	+			-									+	+	+			
1-azanaphthalene		TR	40							+	+												+	+	+			
C9H7N		TR	60							+	+												+	+	+			
		TR	80							+	+																	
		TR	100							+	+																	

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Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1204 chloroacetaldehyde chloroethanal ClCH ₂ CHO C ₂ H ₃ ClO	TR	20	-					+	+								+	+
		40						+	+								+	+
		60						+	+								+	+
		80						+	+									
1205 chloroacetone 1-chloro-2-propanone monochloroacetone ClCH ₂ COCH ₃ C ₃ H ₅ ClO	TR	20	-					+	+	-				-		0	0	+
		40						+	+							0	0	+
		60						+	+							0	0	+
		80						+	+									+
		100						+	+								+	+
1206 chloral hydrate trichloroacetaldehyde hydrate CCl ₃ CH(OH) ₂ C ₂ H ₃ Cl ₃ O ₂	TR	20	-	+	0	0	-	+	+			0		-	0	0	0	
		40		+	0	0		+	+			0		-	0	0	0	
		60		+	-	-		+	+			-			0	0	0	
		80						+	+									
		100						+	+									
1207 chloramine B N-chlorobenzenesulfonic acid amide sodium sal C ₆ H ₅ SO ₂ N(Cl)Na C ₆ H ₅ ClNNaO ₂ S	wä	20	+	+	+	+		+	+			+		+	+	-	-	+
		40						+	+								+	+
		60						+	+								+	+
		80						+	+								+	+
		100						+	+								+	+
1208 chlorobenzene monochlorobenzene C ₆ H ₅ Cl C ₆ H ₅ Cl	TR	20	-	0	0	0	+	+	+	-	-	0		-	-	-	-	+
		40	-	-	-	-	+	+	+		-	-					+	+
		60	-	-	-	-	+	+	+		-	-					+	+
		80					0	+	+		-						+	+
		100			-	-	0	+	+		-	-					+	+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1209	sodium hypochlorite	wä	5%	20	+	0	0	0	+	+	+			0	-	-	+	+	+	+	+	-	+	+	+	-	-	+
		wä	5%	40	+	0	0	0	0	+	+	+			0			0	+	+	+	+	+	+	+			+
		wä	5%	60	0	-	-	-	0	+	+	+			-						+	+						
		wä	5%	80					-	+	+	+									+	+						
		wä	5%	100						+	+	+									+	+						
		wä	12,5%	20	+	0	0	0	+	+	+	+	-		0	-	-	+	+	+	+	+	-	+	+	+	-	+
		wä	12,5%	40	+	0	-	-	0	+	+	+			-			-	+	+	+	+		+	+	+		+
		wä	12,5%	60	0				-	+	+	+									+	+						
		wä	12,5%	80						+	+	+									+	+						
		wä	12,5%	100						+	+	+										+						
		wä	15%	20	+	-	-	-	+	+	+	+	-		-	-	-	0	+	+	+	+	-	+	+	+	-	+
		wä	15%	40	+				0	+	+	+						-	+	+	+	+		+	+	+		+
		wä	15%	60	-				-	+	+	+									+	+						
		wä	15%	80						+	+	+									+	+						
		wä	15%	100						+	+	+										+						
1210	bromochloromethane		TR	20	-	-	-	-		+	+		-	-			-				+	+	+	+	+	+	+	+
			TR	40						+	+										+	+	+	+	+	+	+	+
			TR	60						+	+										+	+	+	+	+	+	+	+
CH2BrCl																												

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1211 chloroacetic acid monochloroacetic acid ClCH2CO2H C2H3ClO2	wä	33%	20	+	+	+	+	+	+			+		-	0	-	-	+	+	+	+	+	+	-	+	
	wä	33%	40	+	+	+	+	+	+			+						+	+	+	+	+	+		+	
	wä	33%	60	0	+	+	+	+	+			+							+	+	+		+		+	
	wä	33%	80				+	+	+																	
	wä	33%	100					+	+																	
	wä	50%	20	+	+	+	+	+	+			+		-	0	-	-	+	+	+	+	+	+	-	+	
	wä	50%	40	+	+	+	+	0	+	+		+						+	+	+	+	+	+		+	
	wä	50%	60	0	+	+	-	+	+			+							+	+	+		+		+	
	wä	50%	80					+	+																	
	wä	50%	100					+	+																	
	wä	85%	20	+	+	+	+	+	+			+		-	0	-	-	+	+	+	+	+	+	-	+	
	wä	85%	40	+	+	+	+	0	+	+		+							+	+	+	+	+		+	
	wä	85%	60	0	+	+	-	+	+			+							+	+	+		+		+	
	wä	85%	80					+	+																	
	wä	85%	100					+	+																	

1212 chloroethanol ethylene chlorohydrin ClCH2CH2OH C2H5ClO		TR	20	-	+	0	0	+	+	+	-		0		-	0	-	-	+		+	+	+	+	+	+
		TR	40	-	+			0	+	+									+		+	+	+			
		TR	60	-	+	0	0	0	+	+			0						+		+	+	+			
		TR	80					-	+	+									+							
		TR	100						+	+									+							

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Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1213	chlorine	gf, fe	TR, GK	20	0	-	-	-	0	+	+	+	+	+	+	+	+	+
		gf, fe	TR, GK	40					0	+	+	+	+	+	+	+	+	+
		gf, fe	TR, GK	60					-	+	+	+	+	+	+	+	+	+
		gf, fe	TR, GK	80					+	+	+	+	+	+	+	+	+	+
		gf, fe	TR, GK	100					+	+	+	+	+	+	+	+	+	+
		gf, tr	TR, GK	20	0	-	-	-	+	+	+	-	-	-	-	+	+	+
		gf, tr	TR, GK	40	0				+	+	+					+	+	+
		gf, tr	TR, GK	60	-				+	+	+					+	+	+
		gf, tr	TR, GK	80					+	+	+					+	+	+
		gf, tr	TR, GK	100					+	+	+					+	+	+
1215	chloride of lime	wä	GL	20	+	+	+	+	+	+	+	0	+	+	+	+	+	+
		calcium chloride hypochlorite	wä	GL	40	+	+	+	+	+	+	0	+	+	+	+	+	+
			wä	GL	60		+	+	+	0	+	+		+	+	+	+	+
		CaCl(OCl) + Ca(OH) ₂	wä	GL	80				0	+	+				+	+	+	+
		CaCl ₂ O	wä	GL	100				+	+	+					+	+	+
1216	4-chloro-m-cresol		TR	20	-	-	-	-	+	+	+	-						
		4-chloro-3-methylphenol	TR	40					+	+	+							
		1-chloro-4-hydroxy-2-methylbenzene	TR	60					+	+	+							
		C ₁₀ H ₇ ClO	TR	80					+	+	+							
		C ₇ H ₇ ClO	TR	100					+	+	+							
1217	chloroform		TR	20	-	-	-	-	+	+	+	-	-	-	0	0	+	+
		trichloromethane	TR	40	-	-	-	-	+	+	+	-	-				+	+
			TR	60	-	-	-	-	+	+	+	-	-				+	+
		CHCl ₃																

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		Condition	Concentration	Temperature [°C]	Material																							
					PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1218	chlorophenol (2-, 3- a. 4-)		TR	20	+					+	+	+																
			TR	40						+	+	+																
			TR	60						+	+	+																
			TR	80						+	+	+																
			TR	100						+	+	+																
CIC6H4OH C6H5ClO																												
1219	chloric acid	wä	10%	20	+	+	+	+	+	+	+	-	-	+	-	-		-	+		-	+		+	0	0		
		wä	10%	40	+	+	0	0	+	+	+			0					+		-	+		+				
		wä	10%	60	0		-	-		+	+				-							+		+				
		wä	10%	80						+	+																	
		wä	10%	100						+	+																	
		wä	20%	20	+	0	0	0	+	+	+			0	-	-	-	-	+		-	+		+	-	-		
		wä	20%	40	+		-	-	+	+	+			-					+			+		+				
		wä	20%	60	-					+	+											+		+				
		wä	20%	80						+	+																	
		wä	20%	100						+	+																	
HClO3																												
1220	chlorosulfonic acid		TR	20	-	-	-	-	0	+	+	-	-	-		-	-	-	+	+	-	+		+				
			TR	40					-	+	+								+	+	-	+		+				
			TR	60						+	+									+								
			TR	80						+	+									+								
			TR	100						+	+									+								
CISO3H HCISO3 P																												
1221	chlorotoluene (2-, 3- a. 4-)		TR	20	-	-	-	-		+	+	-	-	-		-	-	-	+	+	+	+	+	+	+	+	+	
			TR	40						+	+									+	+		+	+	+	+	+	
			TR	60						+	+									+	+		+	+	+	+	+	
			TR	80						+	+									+			+	+	+	+	+	
			TR	100						+	+									+			+		+	+	+	
CH3C6H4Cl C7H7Cl																												

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				PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301
1222 chlorotrifluoroethylene trifluorovinyl chloride ClCF=CF2 C2ClF3	gf	TR, GK	20		-	-	-		+	+						-									Hast-C 2,4537
	gf	TR, GK	40						+	+															V4A 1,4571
	gf	TR, GK	60						+	+															V2A 1,4301
	gf	TR, GK	80						+	+															
	gf	TR, GK	100						+	+															
1224 chlorine, aqueous solution Cl2	wä	GL	20	0	0	0	0	+	+	+	-		0	-	-	0	+	+	+	+		+	+	+	+
	wä	GL	40	0	0			+	+	+									+	+		+	+		
	wä	GL	60					+	+	+									+	+		+	+		
	wä	GL	80					+	+	+									+						
	wä	GL	100					+	+	+									+						
1225 hydrogen chloride HCl	gf	TR, GK	20	+	+	+	+	+	+	+			+		0	+	+	+	+						
	gf	TR, GK	40	+	+	+	+	+	+	+			+		-	+	+	+	+						
	gf	TR, GK	60	0	+	+	+	+	+	+			+			+	+	+	+						
	gf	TR, GK	80					+	+	+															
	gf	TR, GK	100					+	+	+															
1226 potassium chromium(III) sulfate chromium(III) potassium sulfate chromium alum CrK(SO4)2 CrKO8S2	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80					+	+	+					+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100					+	+	+						+	+	+	+	+	+				+
1227 chromium(III) chloride CrCl3 Cl3Cr	wä	GL	20	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	60	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	80					+	+	+									+	+	+	+	+	+	+
	wä	GL	100					+	+	+									+	+	+				+

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1228	chromium(III) fluoride	wä	GL	20	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+			+		
		wä	GL	40	+	+	+	+	+	+	+				+				+	+	+	+	+	+	+			+		
		wä	GL	60		+	+			+	+	+			+				+	+	+	+	+	+	+			+		
		wä	GL	80						+	+	+									+	+	+	+				+		
		wä	GL	100							+	+									+	+	+					+		
1229	chromium(III) hydroxide	wä	GL	20	+	+	+	+	+	+	+			+				+			+	+	+	+	+	+		+		
		wä	GL	40		+	+	+	+	+	+				+			+			+	+	+	+	+	+		+		
		wä	GL	60		+	+	+	+	+	+				+			+			+	+	+	+	+	+		+		
		wä	GL	80							+	+									+	+	+	+	+	+		+		
		wä	GL	100							+	+									+	+	+					+		
1230	chromium(III) nitrate	wä	GL	20	+	+	+	+	+	+	+		+	+				+	+	+	+	+	+	+	+	+		+		
		wä	GL	40	+	+	+	+	+	+	+		+	+				+	+	+	+	+	+	+	+	+		+		
		wä	GL	60	0	+	+	+	+	+	+			+					+	+	+	+	+	+	+	+		+		
		wä	GL	80						+	+	+									+	+	+	+	+	+		+		
		wä	GL	100							+	+									+	+	+					+		
1231	chromium(III) oxide		TR	20	+	+	+	+	+	+	+	-		+				+	+	+										
			TR	40	+	+	+	+	+	+	+				+				+	+	+									
			TR	60		+	+	+	+	+	+				+				+	+	+									
			TR	80						+	+	+							+	+	+									
			TR	100						+	+	+																		
CrF3																														
Cr(OH)3 H3CrO3																														
Cr(NO3)3 CrN3O9																														
Cr2O3																														

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Chemical Resistance

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1232	chromic acid																											
CrO3 + H2O H2CrO4	P	wä	20%	20	+	+	+	+	+	+	+	+	-		+	-	-	0	+	+	+	+	+	+	+	-	-	
		wä	20%	40	+	+	0	0	+	+	+			0			0	+	+	+	+	+	+	+	+	+		
		wä	20%	60	0	0	-	-	+	+	+			-			-	+	+	+	+	+	+	+	+			
		wä	20%	80					+	+	+							+	+	+	+	+	+	+	+	-	+	
		wä	20%	100						+	+																	
		wä	30%	20	+	+	0	0	+	+	+	-		0	-	-	0	+	+	+	+	+	+	+	+	+	-	-
		wä	30%	40	+	0	-	-	+	+	+			-			0	+	+	+	+	+	+	+	+	+		
		wä	30%	60	0	-			+	+	+						-	+	+	+	+	+	+	+	+	+		
		wä	30%	80					+	+	+							+	+	+	+	+	+	+	+	-	+	
		wä	30%	100						+	+																	
		wä	50%	20	+	+	0	0	+	+	+	-	-	0	-	-	0	+	+	+	+	+	+	+	+	+	-	-
		wä	50%	40	+	0	-	-	+	+	+			-			0	+	+	+	+	+	+	+	+	+		
		wä	50%	60	0	-			+	+	+						-	+	+	+	+	+	+	+	+	+		
		wä	50%	80					+	+	+							+	+	+	+	+	+	+	+	-	+	
		wä	50%	100						+	+																	
		wä	60%	20	+	0	0	0	+	+	+	-	-	0	-	-	0	+	+	+	+	+	+	+	+	+	-	-
		wä	60%	40	+	-	-	-	+	+	+			-			0	+	+	+	+	+	+	+	+	+		
		wä	60%	60					+	+	+						-	+	+	+	+	+	+	+	+	+		
		wä	60%	80						+	+									+	+		+	+	+	+	-	+
		wä	60%	100						+	+																	
1233	chromosulfuric acid																											
K2CrO4/H2SO4/H2O = 250g/200g/1000g			20	+	-	-	-	+	+	+	-	-	-	-					+	+		+		+	-	-		
			40					+	+	+									+	+		+		+				
			60						+	+										+	+							
			80						+	+									+									
			100						+	+																		

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1234	chromosulfuric acid	20	+				+	+	+	-			-					+	+		+		+	-	-	
		40					+	+	+									+	+		+					
		60						+	+										+	+						
		80						+	+										+							
		100						+	+																	
1235	chromosulfuric acid	20	+				+	+	+	-			-					+	+		+		+	-	-	
		40					+	+	+									+	+		+					
		60						+	+									+	+							
		80						+	+									+								
		100						+	+																	
1236	chromosulfuric acid	20	+				+	+	+				-					+	+		+		+	-	-	
		40					+	+	+									+	+		+		+			
		60						+	+									+	+							
		80						+	+									+								
		100						+	+																	
1237	chromosulfuric acid	20	+	-	-	-	+	+	+	-	-	-	-	-	0	+	+	+	+		+		+	-	-	
		40	0				+	+	+						0	+	+	+	+		+		+			
		60					+	+	+							+	+	+	+							
		80					0	+	+									+								
		100						+	+																	

K2CrO4/H2SO4/H2O = 340g/10g/1000g

K2CrO4/H2SO4/H2O = 400g/10g/100g

K2CrO4/H2SO4/H2O = 400g/10g/1000g

K2CrO4/H2SO4/H2O = 500/150/350g

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	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1238	citric acid		20	+	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+	+	+	+	
			40	+	+	+	+	+	+	+	+			+		-	+	+	+	+	+	+	+	+	+	+	+	
			60	+	+	+	+	+	+	+	+			+			+	+	+	+	+	+			+	+	+	
			80			+	+	+	+	+	+			+				+	+	+	+	+						
			100					+	+	+	+								+	+	+	+						
			GL	20	+	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+	+	+	+
			GL	40	+	+	+	+	+	+	+			+		-	+	+	+	+	+	+	+	+	+	+	+	
			GL	60	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+			0	+	
			GL	80			+	+	+	+	+			+				+	+	+	+	+	+					
	GL	100					+	+	+									+	+									
1239	crotonaldehyde		20	-	+	+	+	+	+	+	-		+		+	+	+	+	+	+		+	+	+	+	+	+	
			40		+			+	+	+									+	+		+	+	+	+	+	+	
			60		0			0	+	+										+	+		+	+	+	+	+	
			80						+	+											+		+	+	+	+	+	
			100						+	+											+		+		+	+	+	
1241	crotonic acid		20	+	-	-	-		+	+			-							+		+	+	+				
			40						+	+										+		+	+	+				
			60						+	+										+		+		+				
			80						+	+										+		+		+				
			100						+	+										+		+						
1242	cumene		20	-	-	-	-	+	+	+		-	-		-	-	+	+	+	+		+	+	+	+	+	+	
			40					+	+	+									+	+		+	+	+	+	+	+	
			60					+	+	+									+	+		+	+	+	+	+	+	
			80						+	+										+		+	+	+	+	+	+	
			100						+	+										+		+	+	+	+	+	+	

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1243	cyanamide		TR	20	-	-	-	-	-	+	+																	
			TR	40						+	+																	
			TR	60						+	+																	
			TR	80						+	+																	
			TR	100						+	+																	
H2NCN																												
CH2N2																												
1244	cyanoacetic acid ethyl ester		TR	20	-	-	-	-	-	+	+			-							+	+		+	+	+	+	+
			TR	40							+	+									+	+		+	+	+	+	+
			TR	60							+	+									+	+		+	+	+	+	+
			TR	80							+	+										+		+	+	+	+	+
			TR	100							+	+										+		+		+	+	+
ethyl cyanoacetate																												
NCCH2CO2C2H5																												
C5H7NO2																												
1246	cyclohexane		TR	20	-				+	+	+	0	+			+	-	+	+	+	+		+	+	+	+	+	+
			TR	40					+	+	+	0									+	+		+	+	+	+	+
			TR	60					+	+	+										+	+		+	+	+	+	+
			TR	80					+	+	+										+	+		+	+	+	+	+
hexahydrobenzene																												
C6H12																												
P																												
1247	cyclohexanol		TR	20	+	+	+	+	+	+	+			+		-	-			+	+		+	+	+	+	+	+
			TR	40	+	+	+	+	+	+	+			+						+	+		+	+	+	+	+	+
			TR	60	0	+	0	0	0	0	+	+			0						+	+		+	+	+	+	+
			TR	80					0	+	+											+		+	+	+	+	+
			TR	100					-	+	+											+		+		+	+	+
C6H11OH																												
C6H12O																												
1248	cyclohexanone		TR	20	-	+	+	+	+	+	+	-	-	+		-	-	-	-	+	+		+	+	+	+	+	+
			TR	40		0	0	0	0	0	+	+		-	0						+	+		+	+	+	+	+
			TR	60		0	0	0	0	0	+	+		-	0						+	+		+	+	+	+	+
			TR	80					-	+	+		-								+	+		+	+	+	+	+
			TR	100							+	+		-							+	+		+		+	+	+
C6H10O																												

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1249	cyclohexene	TR	20	-	-	-	-	+	+					-	-	-	-	+	+		+	+	+	+	+	+
		TR	40					+	+									+	+		+	+	+	+	+	+
		TR	60					+	+									+	+		+	+	+	+	+	+
		TR	80					+	+										+		+	+	+	+	+	+
C6H10	P																									
1250	cyclohexylamine	TR	20	-	-	-	-	+	+			-			-	-	-	+	+		+	+	+	+	+	+
		TR	40					+	+									+	+		+	+	+	+	+	+
		TR	60					+	+									+	+		+	+	+	+	+	+
		TR	80					+	+										+					+	+	+
		TR	100					+	+									+						+	+	+
1252	cymene (o-, m- a. p-)	TR	20	-	-	-	-	+	+			-									+	+	+			
		TR	40					+	+												+	+	+			
		TR	60					+	+												+	+	+			
		TR	80					+	+												+	+	+			
		TR	100					+	+												+	+	+			
1253	L-cysteine	TR	20			+	+	+	+			+														
		TR	40					+	+																	
		TR	60					+	+																	
		TR	80					+	+																	
		TR	100					+	+																	
1254	L-cystine	TR	20			+	+	+	+			+														
		TR	40					+	+																	
		TR	60					+	+																	
		TR	80					+	+																	
		TR	100					+	+																	

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Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1255	DDT	TR	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1256	decaline	TR	20	+	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	40	+	0	+	+	+	+	+	+	+	+	+	+	0	0	+	+	+
		TR	60	+	0	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+
		TR	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1257	dextran	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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Condition	Concentration	Temperature [°C]	Material																			
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor
1258 starch gum (C6H10O5) _n • xH2O C6H10O5	dextrin	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1259 dextrose C6H12O6	D(+)-glucose	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1260 dibutyl ether CH3(CH2)3O(CH2)3CH3 C8H18O	butyl ether		TR	20	0	+	0	0	0	+	+		0	0	-	-	-	+	+		+	+
			TR	40	-	0	-	-		+	+		-	-	-			+	+		+	+
			TR	60	-	-	-	-		+	+		-	-	-			+	+		+	+
			TR	80					+	+								+			+	+
			TR	100					+	+								+			+	+
			TR	120					+	+								+			+	+
			TR	120					+	+								+			+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1261	dibutyl phthalate	20	-	+	+	+	+	+	+		-	+		-	-	0	0	+
		40	-	0	0	0	0	+	+		-	0					+	+
		60	-	0	0	0	0	+	+			0					+	+
		80			-	-	-	+	+			-					+	+
		100					-	+	+								+	+
		120					-	+	+								+	+
1262	dichlorobenzene (o-, m- a. p-)	20	-	-	-	-	+	+	+		-	-	-	-	+	+	+	+
		40					+	+	+								+	+
		60					+	+	+								+	+
		80					0	+	+								+	+
		100						+	+								+	+
		120						+	+								+	+
1263	dichloroacetic acid	wä 50%	20	+	+	+	+	+	+			+		-		0	0	+
		wä 50%	40	+	+	+	+	+	+			+				0	0	+
		wä 50%	60	-	+	+		+	+			+				-	-	+
		wä 50%	80					+	+									+
		wä 50%	100					+	+									
		TR 20	-	-	-	-	+	+	+			-		-		0	0	+
		TR 40					+	+	+							-	-	+
		TR 60						+	+									+
		TR 80						+	+									+
		TR 100						+	+									
		TR 120						+	+									

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Chemical Resistance

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Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1264 ethylene chloride ClCH2CH2Cl C2H4Cl2 P	1,2-dichloroethane	TR	20	-	-	-	+	+	+		-	-		-	-	0	0	+	+		+	+	+	+	+	+
		TR	40	-	-	-	+	+	+			-						+	+		+	+	+	+	+	+
		TR	60	-	-	-	+	+	+			-						+	+		+	+	+	+	+	+
		TR	80				+	+	+										+			+	+	+	+	+
1265 1,1-dichloroethylene vinylidene dichloride CH2=CCl2 C2H2Cl2 P	1,1-dichloroethene	TR	20	-	-	-	-	+	+	+	-	-		-	-	0	0	+	+		+	+	+	+	+	+
1266 dichloromethane methylene chloride CH2Cl2 P	dichloromethane	TR	20	-	-	-	-	+	+	-	-	-		-	-	0	0	+	+		+	+	+	+	+	+
		TR	40	-		-	-	+	+	-	-	-						+	+		+	+	+	+	+	+
1267 1,2-dichloropropane propylene chloride CH3CHClCH2Cl C3H6Cl2 P	1,2-dichloropropane	TR	20	-	-	-	-	+	+		-	-		-	-			+	+		+	+	+	+	+	+
		TR	40					+	+									+	+		+	+	+	+	+	+
		TR	60					+	+									+	+		+	+	+	+	+	+
		TR	80					+	+										+		+	+	+	+	+	+
		TR	100					+	+										+		+		+	+	+	+
1268 1,3-dichloropropene chloroallyl chloride ClCH2CH=CHCl C3H4Cl2 P	1,3-dichloropropene	TR	20	-	-	-	-	+	+		-	-		-	-			+	+		+	+	+	+	+	+
		TR	40					+	+									+	+		+	+	+	+	+	+
		TR	60					+	+									+	+		+	+	+	+	+	+
		TR	80					+	+										+		+	+	+	+	+	+
		TR	100					+	+										+		+		+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1269	1,2-dichlorotetrafluoroethane	gf	TR, GK	20	+	0	-	-	+	+	+			-														
		gf	TR, GK	40	0					+	+																	
		gf	TR, GK	60							+	+																
		gf	TR, GK	80							+	+																
		gf	TR, GK	100							+	+																
1270	Diesel fuels			20	+	+	+	+	+	+	+	+	+	+		+	-	+	+	+	+		+	+	+	+	+	+
				40	+	+	0	0	+	+	+		+	0		+		+	+	+	+		+	+	+	+	+	+
				60	0	0	-	-	+	+	+		+	-							+	+		+	+	+	+	+
				80					+	+	+										+	+		+	+	+	+	+
				100					+	+	+										+	+		+	+	+	+	+
				120					+	+	+											+		+		+	+	+
1271	diethanolamine		TR	20		+	+	+	-	+	+			+				-	-	+	+		+	+	+	+	+	
			TR	40						+	+									+	+		+	+	+	+	+	
			TR	60						+	+									+	+					+	+	
			TR	80						+	+										+					+	+	
			TR	100						+	+										+					+	+	
1272	diethylamine		TR	20	0	+	+	+	0	+	+			+		-	0	-	-	+	+		+	+	+	+	+	
			TR	40	0	0			-	+	+									+	+		+	+	+	+	+	
			TR	60		0				+	+									+	+		+	+	+	+	+	
(C2H5)2NH																												
C4H11N	P																											

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Condition	Concentration	Temperature [°C]	Material																							
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1273	diethylene glycol	TR	20	+	+	+	+	+	+	+	+	-		+	+	+	+	+	+		+	+	+	+	+	+
		TR	40	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	+
		TR	60	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	+
		TR	80					+	+	+				-	+	+	+	+	+		+	+	+	+	+	+
		TR	100					+	+	+					+	+	+	+	+	+		+		+	+	+
1274	diethyl ether	TR	20	-	0	0	0	+	+	+	-		0		-	-	-	+	+	+	+	+	+	+	+	+
		TR	40	-	-	0	0	+	+	+			0					+	+	+	+	+	+	+	+	
1275	diethyl ketone	TR	20	0	+	0	0		+	+	-		0			-	-	+	+		+	+	+	+	+	+
		TR	40						+	+								+	+		+	+	+	+	+	
		TR	60						+	+								+	+		+	+	+	+	+	
		TR	80						+	+								+			+	+	+	+	+	
		TR	100						+	+								+			+		+	+	+	
1276	diglycolic acid	wä	30%	20	+	+	+	+	+	+	+	-	+	+				+	+	+	+	+	+	+	+	+
		wä	30%	40	+	+	+	+		+	+	-		+				+	+	+	+	+	+	+	+	+
		wä	30%	60	0	+	+	+		+	+			+				+	+							+
		wä	30%	80						+	+							+	+							+
		wä	30%	100						+	+							+	+							+
1277	diisobutyl ketone	TR	20	+	+	+	+	+	+	+	-		+		-	0	-	-	+	+		+	+	+	+	+
		TR	40		-	-	-	+	+	+			-					+	+		+	+	+	+	+	
		TR	60		-	-	-	0	+	+			-					+	+		+	+	+	+	+	
		TR	80						+	+									+		+	+	+	+	+	
		TR	100						+	+									+		+		+	+	+	

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Chemical Resistance

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1278	diisopropyl ether	TR	20	-	0	-	+	+	+	+	-	-	-	-	-	-	-	+	+	-	+	+	+	+	+	+
		isopropyl ether	TR	40	-	0	-	+	+	+	+	-	-	-	-	-	-	+	+	+	-	+	+	+	+	+
		(CH3)2CHOCH(CH3)2	TR	60	-	-	-	+	+	+	-	-	-	-	-	-	-	+	+	+	-	+	+	+	+	+
		C6H14O																								
		P																								
1279	dimethylamine	wä	40%	20	-	+	+	+	0	+	+		+	-	0	-	-	+	+		+	+	+			
		wä	40%	40		0		-	+	+									+	+		+	+	+		
		(CH3)2NH																								
		C2H7N																								
		P																								
1280	N,N-dimethylaniline	TR	20	-			+	+	+		-				-			+	+		+	+	+	+	+	+
		TR	40				+	+	+									+	+		+	+	+	+	+	+
		TR	60				0	+	+									+	+		+	+	+	+	+	+
		TR	80				-	+	+									+	+		+	+	+	+	+	+
		TR	100					+	+										+					+	+	+
		TR	120					+	+										+					+	+	+
1282	dimethylformamide	TR	20	-	+	+	+	-	+	+	-	+		-	0	-	-	+	+		+	+	+	+	+	+
		N,N-dimethylformamide	TR	40		+	+	+		+	+		+						+	+		+	+	+	+	+
		DMF	TR	60		0	+	+		+	+		+						+	+		+	+	+	+	+
		HCON(CH3)2	TR	80					+	+									+	+					+	+
		C3H7NO	TR	100					+	+										+					+	+
			TR	120					+	+										+					+	+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1283	1,1-dimethylhydrazine	wä	GL	20	+	+	+	+		+	+			+						+	+					+	+	+
		wä	GL	40	+	+	+	+			+	+			+					+	+					+	+	+
		wä	GL	60	+						+	+									+	+				+	+	+
		wä	GL	80							+	+										+				+	+	+
		wä	GL	100							+	+										+				+	+	+
1284	dimethyl phthalate		TR	20	-	0	+	+		+	+		-	+		-	0	+	+	+	+		+	+	+	+	+	+
			TR	40							+	+									+	+		+	+	+	+	+
			TR	60							+	+									+	+		+	+	+	+	+
			TR	80							+	+										+		+	+	+	+	+
			TR	100							+	+										+		+		+	+	+
			TR	120							+	+											+		+		+	+
1285	sodium hydrogenphosphate	wä	GL	20	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	80			+	+	+	+	+	+		+	+	+					+	+	+	+	+	+		+
		wä	GL	100					+	+	+	+									+	+	+					+
1286	1,4-dioxane		TR	20	-	+	0	0	0	+	+	-		0		-	0	-	-	+	+		+	+	+	+	+	+
			TR	40		+	0	0	-	+	+	-		0						+	+		+	+	+	+	+	+
			TR	60		+	0	0		+	+			0							+		+	+	+	+	+	+
			TR	80			-	-		+	+			-								+		+	+	+	+	+
			TR	100						+	+											+		+		+	+	+

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1287	diphenyl	TR	20	-	+	0	0	-	+	+		0	0	0												
		biphenyl	TR	40		+	0	0		+	+		0	0												
		dibenzene	TR	60		+	0	0		+	+		0													
		C6H5-C6H5	TR	80					+	+																
		C12H10	TR	100					+	+																
1288	diphenylamine	TR	20	-	-	-	-	-	+	+			-													
		N-phenylaniline	TR	40					+	+																
			TR	60					+	+																
		(C6H5)2NH	TR	80					+	+																
		C12H11N	TR	100					+	+																
1289	diphenyl ether	TR	20	-	-	-	-	-	+	+		-	-			-		+	+		+	+	+	+	+	+
		diphenyl oxide	TR	40					+	+								+	+		+	+	+	+	+	+
		phenyl ether	TR	60					+	+								+	+		+	+	+	+	+	+
		(C6H5)2O	TR	80					+	+									+		+	+	+	+	+	+
		C12H10O	TR	100					+	+									+		+		+	+	+	+
			TR	120					+	+									+		+		+	+	+	+
1290	benzophenone	TR	20						+	+								+	+		+	+	+			
		diphenyl ketone	TR	40					+	+								+	+		+	+	+			
			TR	60					+	+									+		+	+	+			
		(C6H5)2CO	TR	80					+	+									+		+	+	+			
		C13H10O	TR	100					+	+									+		+		+			

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Condition	Concentration	Temperature [°C]																								
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1298 ferric chloride FeCl3	iron(III) chloride	wä 10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+
		wä 10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 48% (GL)	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+
		wä 48% (GL)	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 48% (GL)	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 48% (GL)	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 48% (GL)	100	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+
1299 Fe(NO3)3 FeN3O9	iron(III) nitrate	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																								
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1300 Fe ₂ (SO ₄) ₃ Fe ₂ O ₁₂ S ₃	iron(III) sulfate	wä 10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 50%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 50%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 50%	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 50%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 50%	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1301 Fe(NO ₃) ₂ FeN ₂ O ₆	iron(II) nitrate	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1302 FeSO ₄ FeO ₄ S	iron(II) sulfate	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1303	iron oxalate	20	+	+	+	+	+	+	+			+			+	+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		80			+	+	+	+	+			+			+	+	+	+	+	+
		100						+	+								+	+		
1307	epichlorohydrin	20	-	+	+	+	-	+	+			+			-	-	-	+	+	+
		40	-	+	+	+	-	+	+			+						+	+	+
		60		+	+	+	-	+	+			+						+	+	+
		80					-	+	+									+	+	+
		100					-	+	+									+		+
		120					-	+	+											
1308	natural gas	20	+	+	+	+	+	+	+	+		+		+	-	+	+	+		
		40					+	+	+	+					+	+	+			
		60					+	+	+							+	+			
		80					+	+	+							+	+			
		100					+	+	+							+	+			
1309	petroleum	20	0	+	+	+	+	+	+	+		+			-	+	+	+	+	+
		40		0	0	0	+	+	+	+		0					+	+	+	+
		60		-	-	-	+	+	+			-					+	+	+	+
		80					+	+	+								+	+	+	+
		100					+	+	+								+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

1310	acetic acid																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

	Hast-C 2,4537	+																										
	V4A 1,4571																											
	V2A 1,4301																											
	ZrO2	+																										
	Al2O3 Sensor																											
	Al2O3	+																										
	Carbon																											
	SSiC	+	+																									
	FFKM	+																										
	FKM+																											
	FKM = FPM																											
	EPDM																											
	NBR																											
	HG1																											
	PEEK																											
	PSU																											
	PA12																											
	FEP, PFA	+	+																									
	PTFE	+	+																									
	PVDF																											
	PP-GF30																											
	PP																											
	PE																											
	PVC-U																											
	Temperature [°C]	80	100	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
	Concentration	80%	80%	90%	90%	90%	90%	90%	95%	95%	95%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	Condition	wä	wä	wä	wä	wä	wä	wä	wä	wä	wä	wä	wä	tr	tr	tr	tr	tr	tr	tr	tr	tr	tr	tr	tr	tr	tr	

1311	ethane	gf	TR, GK	20	+	+	+	+	+	+			+		+	-	+	+							
		gf	TR, GK	40		+			+	+	+														
		gf	TR, GK	60		+			+	+	+														
CH3CH3		gf	TR, GK	80					+	+	+														
C2H6		gf	TR, GK	100					+	+	+														

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution
GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1312	ethanol	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
		wä	10%	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
		wä	10%	60	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+		
		wä	10%	80					+	+	+						+		+	+	+	+	+	+	+	+	+		
		wä	50%	20	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	
		wä	50%	40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+		+	+	+	+	+	
		wä	50%	60	0	+	+	+	+	+	+			+			+	+	+	+	+	+		+	+	+	+	+	
		wä	50%	80					+	+	+						+			+	+	+		+	+	+	+	+	
			TR	20	+	+	+	+	+	+	+	-	+	+	+	+	0	+	+	+	+	+		+	+	+	+	+	+
			TR	40	+	+	+	+	+	+	+	+		+	+	+	0	+	+	+	+	+		+	+	+	+	+	+
			TR	60	0	+	+	+	+	+	+	+			+		-				+	+		+	+	+	+	+	+
			TR	80						+	+	+									+	+		+	+	+	+	+	+
1313	ethanolamine		TR	20	-	+	+	+	-	+	+	-	+	+		+	+	-	-	+	+	+	+	+	+	+	+	+	
			TR	40		+	+	+		+	+		+	+		+	+			+	+	+	+	+	+	+	+	+	
			TR	60		+	+	+		+	+		+	+		0	+			+	+				+			+	
			TR	80			+	+		+	+		+	+			+				+				+			+	
			TR	100						+	+										+							+	
1314	ethene	gf	TR, GK	20	+	+			+	+	+						-												
		gf	TR, GK	40		+			+	+	+																		
		gf	TR, GK	60		0			+	+	+																		
		gf	TR, GK	80					+	+	+																		
		gf	TR, GK	100					+	+	+																		

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1316	2-ethyl-1-hexanol	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1317	ethyl acetate	20	-	+	+	+	-	+	+	-	-	+	-	-	-	-	-	+	+	+
		40	0	0	0	0	+	+	+	+	0	+	+	+	+	+	+	+	+	+
		60	-	-	-	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1318	ethyl acrylate	20	-	0	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	-	0	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	-	0	0	0	-	+	+	+	+	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1319	ethylbenzene	20	-	0	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	-	0	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	-	0	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1320 ethyl chloride chloroethane CH3CH2Cl C2H5Cl	gf	TR, GK	20	-	0	0	0	+	+	+			0		-	-	0	0										
	gf	TR, GK	40		-	0	0	+	+	+			0				0	0										
	gf	TR, GK	60					+	+	+							0	0										
	gf	TR, GK	80					+	+	+																		
	gf	TR, GK	100					+	+	+																		
1321 ethylene bromide 1,2-dibromoethane BrCH2CH2Br C2H4Br2 P		TR	20	-	0	-	-	+	+	+			-		-	-	0	0	+	+		+	+	+	+	+	+	
		TR	40		-			+	+	+									+	+		+	+	+	+	+	+	
		TR	60					+	+	+									+	+		+	+	+	+	+	+	
		TR	80					+	+	+									+	+		+	+	+	+	+	+	
		TR	100					+	+	+											+		+		+	+	+	
		TR	120						+	+											+		+		+	+	+	
1322 ethylenediamine ethane-1,2-diamine 1,2-diaminoethane H2NCH2CH2NH2 C2H8N2		TR	20	0	+	+	+		+	+	-		+		-	+	-	-	+	+		+	+	+	+	+	+	
		TR	40	-	+	+	+		+	+			+						+	+		+	+	+	+	+	+	
		TR	60	-	+	+	+		+	+			+						+	+					+	+	+	
		TR	80						+	+										+					+	+	+	
		TR	100						+	+										+					+	+	+	
1323 ethylenediaminetetraacetic acid EDTA Titriplex® II (HO2CCH2)2NCH2CH2N(CH2CO2H)2 C10H16N2O8	wä	0,05% (GL)	20	+	+	+	+	+	+	+			+			+	+	+	+	+								
	wä	0,05% (GL)	40	+	+	+	+	+	+	+			+				+	+	+	+	+							
	wä	0,05% (GL)	60		+	+	+	+	+	+			+				+	+	+	+	+							
	wä	0,05% (GL)	80					+	+	+							+	+	+	+	+							
	wä	0,05% (GL)	100					+	+	+										+	+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1324	ethylene glycol	20	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
1325	ethylene glycol diethyl ether	20	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
1326	ethylene oxide	20	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		40	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		80	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		100	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		120	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
1328	ethyl methyl ketone	20	-	+	+	+	-	+	+	-	-	+	+	+	+	+	+	+
		40	0	0	0	0	+	+	+	-	0	+	+	+	+	+	+	+
		60	0	0	0	0	+	+	+	-	0	+	+	+	+	+	+	+
		80	0	0	0	0	+	+	+	-	0	+	+	+	+	+	+	+
		100	0	0	0	0	+	+	+	-	0	+	+	+	+	+	+	+
		120	0	0	0	0	+	+	+	-	0	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GL = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1329 potassium hexacyanoferrate(II) potassium ferrocyanide prussiate, yellow K ₄ Fe(CN) ₆ C ₆ FeK ₄ N ₆																				
	wä	10%	20	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	10%	40	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	10%	60	0	+	+	+	+	+		+	+		0	+	+	+	+	+	+
	wä	10%	80					+	+	+						+	+	+	+	+
	wä	10%	100					+	+	+							+	+	+	+
	wä	GL	20	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+		+	+		0	+	+	+	+	+	+
	wä	GL	80					+	+	+						+	+	+	+	+
	wä	GL	100					+	+	+							+	+	+	+
1330 potassium hexacyanoferrate(III) potassium ferricyanide prussiate, red K ₃ Fe(CN) ₆ C ₆ FeK ₃ N ₆	wä	10%	20	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	10%	40	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	10%	60	0	+	+	+	+	+		+	+		0	+	+	+	+	+	+
	wä	10%	80					+	+	+						+	+	+	+	+
	wä	10%	100					+	+	+							+	+	+	+
	wä	GL	20	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+		+	+		0	+	+	+	+	+	+
	wä	GL	80					+	+	+						+	+	+	+	+
	wä	GL	100					+	+	+							+	+	+	+
1331 fatty alcohols		TR	20	+	+	+	+	+	+			+		0	-	+	+	+	+	+
		TR	40	+	+	+	+	+	+			+		0		+	+	+	+	+
		TR	60	0	+	0	0	+	+	+		0				+	+	+	+	+
		TR	80					+	+	+							+	+	+	+
		TR	100					+	+	+							+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1332	fatty alcohol sulfates	wä	10%	20	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	+	+	+
alkyl sulfates ROSO3X		wä	10%	40	+	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	+	+	+
		wä	10%	60	0	+	0	0	+	+	+			0				+	+	+	+		+	+	+	+	+	+
		wä	10%	80					+	+	+										+	+		+	+	+	+	+
		wä	10%	100					+	+	+										+	+				+	+	+
1333	triglyceride	fl	H	20	+	+	+	+	+	+	+		+	+		0	-	+	+	+	+	+	+	+	+	+	+	+
		fl	H	40	+	+	+	+	+	+	+		+	+					+	+	+	+	+	+	+	+	+	+
		fl	H	60	0				+	+	+										+	+		+	+	+	+	+
		fl	H	80					+	+	+										+	+		+	+	+	+	+
		fl	H	100					+	+	+										+	+		+		+	+	+
1335	fatty acids > C6		TR	20					+	+	+					0	-	+	+	+	+	+	+	+	+	+	+	+
carboxylic acids > C6 RCO2H			TR	40					+	+	+									+	+	+	+	+	+	+	+	+
			TR	60					+	+	+									+	+		+		+	+	+	+
			TR	80					+	+	+									+	+		+		+	+	+	+
			TR	100						+	+									+	+		+		+	+	+	+
1336	fluorine	gf	TR, GK	20	-	-	-	-	-			-	-	-	-	-	-	0	0	0								
F2 P		gf	TR, GK	40																								
		gf	TR, GK	60																								
		gf	TR, GK	80																								
		gf	TR, GK	100																								
1337	fluoroboric acid	wä	50%	20					+	+	+					-				+	+							
tetrafluoroboric acid hydrogen tetrafluoroborate		wä	50%	40					+	+	+									+	+							
		wä	50%	60						+	+									+	+							
		wä	50%	80						+	+																	
HBF4	P		50%	100						+	+																	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1338 hexafluorosilicic acid fluorosilicic acid H2SiF6 H2F6Si	wä	10%	20	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+
	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	30%	20	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+
	wä	30%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	30%	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	30%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	30%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	35%	20	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+
	wä	35%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	35%	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	40%	20	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+
	wä	40%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	40%	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution
GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
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1339	hydrofluoric acid	wä	10%	20	+	+	+	-	+	+	+	-		+		-	-	+	+	+	+		-	-	-	-	-	-	
HF	P	wä	10%	40	+	+	+		+	+	+			+				+	+	+	+								
		wä	10%	60	0	+	0		+	+	+			0						+	+								
		wä	10%	80			0		+	+	+			0							+								
		wä	10%	100					+	+	+										+								
		wä	40%	20	+	+	+	-	+	+	+	-	0	+		-	-	+	+	+	+		-	-	-	-	-	-	-
		wä	40%	40	0	+	+		+	+	+			+				+	+	+	+								
		wä	40%	60	-				+	+	+									+	+								
		wä	40%	80					+	+	+										+								
		wä	40%	100					+	+	+										+								
		wä	50%	20	0	+	+	-	+	+	+	-	0	+	0	-	-	+	+	+	+		-	-	-	-	-	-	-
		wä	50%	40	-	+	0		+	+	+			0	0			+	+	+	+								
		wä	50%	60					+	+	+										+								
		wä	50%	80					+	+	+										+								
		wä	60%	20	-	+	0	-	+	+	+	-	-	0		-	-	0	0	+	+		-	-	-	-	-	-	-
		wä	60%	40		0	0		+	+	+			0				0	0	+	+								
		wä	60%	60					+	+	+										+								
		wä	70%	20	-	+	-	-	+	+	+	-	-	-		-	-	0	0	+	+		-	-	-	-	-	-	-
		wä	70%	40					+	+	+							0	0	+	+								
		wä	70%	60					+	+	+										+								

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution
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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1340	formaldehyde	wä	15%	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	15%	40	+	+	+	+	+	+	+			+	+		+	+		+	+	+	+	+	+	+	+	+	
		wä	15%	60	0	+	+	+	+	+	+			+	+		+	+		+	+	+	+	+	+	+	+	+	
		wä	15%	80							+	+									+	+				+	+	+	
		wä	15%	100							+	+										+					+	+	
		wä	30%	20	+	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	
		wä	30%	40	+	+	+	+	+	+	+	+		+	+		+	+	-	+	+	+	+	+	+	+	+	+	
		wä	30%	60	0	+	+	+	+	+	+	+			+		+			+	+	+	+	+	+	+	+	+	
		wä	30%	80							+	+									+	+					+	+	+
		wä	30%	100							+	+										+						+	+
		wä	40%	20	+	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	40%	40	+	+	+	+	+	+	+	+		+	+		+	+	-	+	+	+	+	+	+	+	+	+	+
		wä	40%	60	0	+	+	+	+	+	+	+			+		0				+	+	+	+	+	+	+	+	+
		wä	40%	80							+	+									+	+					+	+	+
		wä	40%	100							+	+											+				+	+	+
1341	formamide		TR	20	-	+	+	+		+	+			+		+	+	0	0	+	+		+	+	+	+	+	+	
			TR	40		+	+	+		+	+			+		+	+	0	0	+	+		+	+	+	+	+	+	
			TR	60		+	+	+		+	+			+		-	+	0	0	+	+		+	+	+	+	+	+	
			TR	80						+	+											+				+	+	+	
			TR	100						+	+											+				+	+	+	
1342	Freon 11 (CFC-11, F-11)	gf	TR, GK	20	+	-	-	-	+	+	+			-		+	-	0	0	-									
		gf	TR, GK	40					+	+	+																		
		gf	TR, GK	60					+	+	+																		
		gf	TR, GK	80					+	+	+																		
		gf	TR, GK	100					+	+	+																		

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1343 Freon 112 (CFC-112, F-112) 1,1,2,2-tetrachloro-1,2-difluoroethane CCl2FCCl2F C2Cl4F2 P		TR	20	+	-	-	-	+	+	+		0	-		0	0											
		TR	40					+	+	+																	
		TR	60						+	+																	
		TR	80						+	+																	
		TR	100						+	+																	
1344 Freon 113 (CFC-113, F-113) 1,2,2-trichloro-1,1,2-trifluoroethane CClF2CCl2F C2Cl3F3 P		TR	20	+				+	+	+					+	-	+	+	-								
		TR	40					+	+	+																	
		TR	60						+	+																	
		TR	80						+	+																	
		TR	100						+	+																	
1345 Freon 12 (CFC-12, F-12) dichlorodifluoromethane CCl2F2	gf	TR, GK	20	+	0	0	0	+	+	+	+		0		0	0	0	0	+								
	gf	TR, GK	40						+	+	+								+								
	gf	TR, GK	60						+	+																	
	gf	TR, GK	80						+	+																	
	gf	TR, GK	100						+	+																	
1346 Freon 21 (HCFC-21, F-21) dichlorofluoromethane CHCl2F	gf	TR, GK	20	-	-	-	-	+	+	+			-						-								
	gf	TR, GK	40					+	+	+																	
	gf	TR, GK	60					+	+	+																	
	gf	TR, GK	80					+	+	+																	
	gf	TR, GK	100					+	+	+																	
1347 Freon 22 (CFC-22, F-22) chlorodifluoromethane CHClF2	gf	TR, GK	20	+				+	+	+									-								
	gf	TR, GK	40					+	+	+																	
	gf	TR, GK	60					+	+	+																	
	gf	TR, GK	80					+	+	+																	
	gf	TR, GK	100					+	+	+																	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GL = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1348	fruit juices			20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
				40	+	+	+	+	+	+	+				+		+	+	+	+	+	+	+	+	+	+	+	+
				60	+	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+
				80			+	+	+	+	+	+			+		+	+	+	+	+	+	+			+	+	+
				100						+	+	+					+	+	+	+	+	+	+			+	+	+
1349	D-fructose	wä	VL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	80			+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100					+	+	+							+	+	+	+	+	+			+	+	+
		wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100					+	+	+							+	+	+	+	+	+			+	+	+
1350	furan		TR	20	-				+	+	+		-			-	-	-	-	+	+		+	+	+	+	+	+
			TR	40					-	+	+									+	+		+	+	+	+	+	+
1351	furfural		TR	20	-	+	+	+	-	+	+			+		-	0	-	-	+	+		+	+	+	+	+	+
			TR	40		+				+	+									+	+		+	+	+	+	+	+
			TR	60		0				+	+									+	+		+	+	+	+	+	+
			TR	80						+	+									+	+					+	+	+
			TR	100						+	+										+					+	+	+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1352	furfuryl alcohol	20	-	+	+	+	+	+	+	-	+	+	+	-	0	-	-	+
		40		+	0	0	+	+	+			0					+	+
		60		+	0	0	0	+	+			0					+	+
		80						+	+									+
		100						+	+								+	+
1353	Genapol X-080	20						+	+							+	+	+
		40						+	+							+	+	+
		60						+	+								+	+
		80						+	+								+	+
		100						+	+								+	+
1356	gelatine	20	+	+	+	+	+	+	+			+		+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+
		60		+	+	+	+	+	+			+						
		80					+	+	+									
		100						+	+									
1358	glutamic acid	20	+	+	+	+	+	+	+			+					+	+
		40		+	+	+		+	+			+					+	+
		60		+	+	+		+	+			+					+	+
		80						+	+								+	+
		100						+	+								+	+
1359	glycolic acid	20	+	+	+	+	+	+	+	+		+		+	+	+	+	+
		40	+	+	+	+	+	+	+	+		+		+	+	+	+	+
		60	0	+	0	0	+	+	+		0		+	+	+	+	+	+
		80					+	+	+							+	+	
		100					0	+	+							+	+	

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Chemical Resistance

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Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1360 glycerol propanetriol HOCH2CH(OH)CH2OH C3H8O3		TR	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	60	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	80			+	+	+	+	+			+		+	+	+	+	+	+					+	+	+
		TR	100					+	+	+					+	+	+	+	+	+	+				+	+	+
		TR	120						+	+											+				+	+	+
1361 3-chloro-1,2-propanediol ClCH2CH(OH)CH2OH C3H7ClO2		TR	20	+	+	+	+	+	+	+			+		-	+	0	0		+		+	+	+	+	+	+
		TR	40	0	+			+	+	+						+				+		+	+	+	+	+	+
		TR	60		+			+	+	+						+				+		+	+	+	+	+	+
		TR	80					+	+	+										+					+	+	+
		TR	100						+	+										+					+	+	+
1362 uric acid 2,6,8-trihydroxypurine C5H4N4O3	wä	GL	20	+	+	+	+	+	+	+	0		+		+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60		+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+		+	+
	wä	GL	80					+	+	+						+			+	+							+
	wä	GL	100						+	+									+	+							+

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1363	urea	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	60	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	100					+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	60	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	100				0	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100					+	+	+	+	+	+	+	+	+	+	+	+
1364	n-heptane		TR	20	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+
			TR	40		0	0	0	+	+	+	+	0	0	+	+	+	+	+	+
			TR	60		0	0	0	+	+	+	0	0		+	+	+	+	+	+
			TR	80				+	+	+	0					+	+	+	+	+
			TR	100				+	+	+						+	+	+	+	+
1365	n-hexane		TR	20	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+
			TR	40		+	0	0	+	+	+	+	0	0	+	+	+	+	+	+
			TR	60		0	-	-	+	+	+	0	-		+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1366	1,2,6-hexanetriol	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		80						+	+					-	0	+	+	+	+	+
		100						+	+						0	+	+	+	+	+
1370	honey	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+			+			+	+	+	+	+	+
		60		0	+	+		+	+			+					+	+	+	+
		80						+	+								+	+	+	+
		100						+	+								+	+	+	+
1371	hydrazine	20	+	+	+	+	-	+	+			+								
		40		+	+	+		+	+			+								
		60		+	+			+	+			+								
		80						+	+											
		100						+	+											
1372	hydrazine hydrate	20	+	+	+	+	-	+	+	-		+		-	+	-	-	+	+	
		40		+	+			+	+			+			+			+	+	
		60		+	+			+	+			+						+		
		80						+	+									+		
1373	hydroquinone	20	+	+	+	+	+	+	+		-	+						+	+	+
		40	+	0	+	+	+	+	+			+						+	+	+
		60		-			+	+	+									+	+	+
		80					+	+	+									+	+	+
		100					+	+	+									+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																								
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1374	hydroxylamine sulfate	VL	20	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	+	+			+	+
	hydroxylammonium sulfate	VL	40	+	+	+	+		+	+	+		0	+	+	+	+	+	+	+	+	+			+	+
	(H3NOH)2SO4	VL	60		+	+	+		+	+	+							+	+	+	+	+				+
	H8N2O6S	VL	80						+	+	+							+	+							
		VL	100						+	+	+							+	+							

1377	isooctane	TR	20	+	+	+	+	+	+	+	+	-		+		+	-	+	+	+	+	+	+	+	+	+
	2,2,4-trimethylpentane	TR	40		0	0	0	+	+	+			0				+	+	+	+	+	+	+	+	+	+
	isobutyltrimethylmethane	TR	60		0	-	-	+	+	+			-					+	+	+	+	+	+	+	+	+
	(CH3)2CHCH2C(CH3)3	TR	80			-	-	+	+	+			-					+	+		+	+	+	+	+	+
	C8H18	TR	100					+	+	+								+	+		+	+	+	+	+	+

1378	2-propanol	TR	20	+	+	+	+	+	+	+	+	-		+		0	+	+	+	+	+	+	+	+	+	+
	Isopropyl alcohol	TR	40	+	+	+	+	+	+	+	+			+		0	+	+	+	+	+	+	+	+	+	+
	isopropanol	TR	60	0	+	+	+	+	+	+	+		0	+		-	0	+	+	+	+		+	+	+	+
	(CH3)2CHOH	TR	80					0	+	+							0	0	+	+		+	+	+	+	+
	C3H8O																									

1379	liquid manure		20		+	+	+		+	+			+													
			40		+	+	+		+	+			+													
			60		+	+	+		+	+			+													
			80						+	+																
			100						+	+																

1380	iodine	gf, TR, GK	20	-				+	+	+				-												
		gf, TR, GK	40	-				+	+	+																
		gf, TR, GK	60	-				+	+	+																
		gf, TR, GK	80						+	+																
		gf, TR, GK	100						+	+																

I2

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Chemical Resistance

Release Date: 2023-02-17

Chemical Resistance		Condition		Concentration	Temperature [°C]	Material																					
						PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301
1381	iodine potassium iodide solution	wä	3% I2	20	0	+	+	+	+	+	+	+			+	-	+	+	+	+	+	-	+	+	+	+	+
		potassium polyiodide solution		wä	3% I2	40	-	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+
		Kxly	wä	3% I2	60	-	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+
		lyKx	wä	3% I2	80					+	+	+							+	+	+	+	+	+			
			wä	3% I2	100					+	+	+								+	+						
1383	hydriodic acid	wä	VL	20	+				+	+	+								+	+	-	+	+	+			
		wä	VL	40	0				+	+	+								+	+		+	+	+			
		wä	VL	60					+	+	+								+	+		+	+	+			
		wä	VL	80					+	+	+																
		wä	VL	100					+	+	+																

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution
GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

1384	potash lye																													
potassium hydroxide KOH HKO	wä	10%	20	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+					
	wä	10%	40	+	+	+	+		+	+	+	+	+	+	-	-	+	+	+	+	+	+			+					
	wä	10%	60	+	+	+			+	+	+	+		+			+	+	+			+			+					
	wä	10%	80			+	-		+	+	+	+						+	+			+			+					
	wä	10%	100						+	+																				
	wä	15%	20	+	+	+	+	-	+	+	+	+		+	+	0	0	+	+	+	+	+	+	0	0	+				
	wä	15%	40	+	+	+	+		+	+	+	+		+	+	-	-	+	+	+	+	+	+			+				
	wä	15%	60	0	+	+			+	+	+	+		+				+	+	+			+			+				
	wä	15%	80				-		+	+	+							+	+			+				+				
	wä	15%	100						+	+																				
	wä	25%	20	+	+	+	+	-	+	+	+	+		+	+	0	0	+	+	+	+	+	+	0	0	+				
	wä	25%	40	+	+	+	+		+	+	+	+		+	+	-	-	+	+	+	+	+	+			+				
	wä	25%	60	0	+	+			+	+	+	+		+				+	+	+			+			+				
	wä	25%	80				-		+	+	+							+	+	-	-	+				+				
	wä	25%	100						+	+																				
	wä	40%	20	+	+	+	+	-	+	+	+	+		+	0	0	+	+	+	+	+	+	+	0	0	+				
	wä	40%	40	+	+	+	+		+	+	+	+		+	-	-	+	+	+	+	+	+				+				
	wä	40%	60	0	+	+			+	+		+		+				+	+	+			+			+				
	wä	40%	80				-		+	+								+	+	-	-	+				+				
	wä	40%	100						+	+																				
	wä	50%	20	+	+	+	+	-	+	+	+	+		+	-	-	+	+	+	+	+	+	0	0	+					
	wä	50%	40	+	+	+	+		+	+	+	+		+	-	-	+	+	+	+	+	+				+				
	wä	50%	60	0	+	+			+	+		+		+				+	+	+			+			+				
	wä	50%	80				-		+	+				0				+	+	-	-	+				+				
	wä	50%	100						+	+																				

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1385	potassium nitrate	wä	10%	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	+	
		wä	10%	40	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	
		wä	10%	60	+	+	+	+	+	+	+	+		+	+		+	+	+	+		+		+	+	+	+	+	
		wä	10%	80			+	+	+	+	+	+			+							+		+	+		+	+	
		wä	10%	100						+	+	+										+						+	
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	
		wä	GL	60	+	+	+	+	+	+	+	+		+	+		+	+	+	+		+		+	+	+	+	+	
		wä	GL	80			+	+	+	+	+	+			+							+		+	+		+	+	
		wä	GL	100						+	+	+										+						+	
1386	potassium acetate	wä	GL	20	+	+	+	+	+	+	+		+	+			+			+	+	+	+	+	+			+	
		acetic acid potassium salt	wä	GL	40	+	+	+	+	+	+	+		+	+			+			+	+	+	+	+	+		+	
		CH3CO2K	wä	GL	60		+	+	+	+	+	+		+	+			+			+	+	+	+	+	+		+	
		C2H3KO2	wä	GL	80			+	+	+	+	+			+			+			+	+		+	+	+		+	
		wä	GL	100					0	+	+										+	+						+	
1387	potassium hydrogencarbonate	wä	GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		potassium bicarbonate	wä	GL	40	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		KHCO3	wä	GL	60		+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		CHKO3	wä	GL	80			+	+		+	+			+	+	-		+	+	+	+	+		+	+	+	+	
		wä	GL	100							+	+									+	+					+	+	
1388	potassium dichromate	wä	GL	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	+	
			wä	GL	40	+	+	+	+	+	+	+	+	+	+		0	+	+	+	+	+		+	+	+	+	+	
		K2Cr2O7	wä	GL	60	0	+	+	+	+	+	+		+	+			+	+	+	+	+		+	+	+	+	+	
		Cr2K2O7	wä	GL	80			+	+	+	+	+			+						+	+		+	+	+	+	+	
		wä	GL	100						+	+	+									+	+					+	+	

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3
1389 potassium bisulfate KHSO4 HKO4S	potassium hydrogensulfate	wä 30%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 30%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 30%	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 30%	80			+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+
		wä 30%	100					+	+								+	+			+
1390 potassium bisulfite KHSO3 HKO3S	potassium hydrogensulfite	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+
		wä GL	100					+	+								+	+			+
1391 tartar L(+)-tartaric acid monopotassium salt KO2CCH(OH)CH(OH)CO2H C4H5KO6	potassium hydrogen-L-tartrate	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80					+	+	+							+	+			
		wä GL	100					+	+	+							+	+			
1392 K3BO3 BK3O3	potassium borate	wä VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä VL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä VL	80					+	+	+							+	+			+
		wä VL	100					+	+	+							+	+			+
		wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80					+	+	+							+	+			+
		wä GL	100					+	+	+							+	+			+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1393	potassium bromate	wä	GL	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+		+	+			0	
		wä	GL	40	+	+	+	+	+	+	+				+		+	+	+	+	+	+		+	+		0	
		wä	GL	60	0	0	0	0	+	+	+				0		+	+	+	+	+	+		+	+		0	
		wä	GL	80					+	+	+						-	+	+	+	+	+						
		wä	GL	100					+	+	+						-	+	+	+	+	+						
1394	potassium bromide	wä	GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	80			+	+	+	+	+		+		+	0	+	+	+	+	+	+		+	+			+
		wä	GL	100					+	+	+							+	+	+	+	+						+
1395	potassium carbonate	wä	10%	20	+	+	+	+	0	+	+		+	+		+	+	+	+	+	+		+	+	+			+
		wä	10%	40	+	+	+	+	-	+	+		+	+				+	0	0	+	+		+	+	+		+
		wä	10%	60	0	+	+				+	+		+	+			+	-	-	+	+		+		+		+
		wä	10%	80							+	+						+			+	+				+		+
		wä	10%	100							+	+									+	+						+
		wä	50%	20	+	+	+	+	-	+	+		+	+			+	+	0	0	+	+		+	+	+		+
		wä	50%	40	+	+	+	+	-	+	+		+	+				+	-	-	+	+		+	+	+		+
		wä	50%	60	0	+	+				+	+			+			+			+	+		+		+		+
		wä	50%	80							+	+						+			+	+				+		+
		wä	50%	100							+	+									+	+						+
		wä	GL	20	+	+	+	+	-	+	+		+	+			+	+	0	0	+	+		+	+	+		+
		wä	GL	40	+	+	+	+	-	+	+		+	+				+	-	-	+	+		+	+	+		+
		wä	GL	60	0	+	+				+	+			+			+			+	+		+		+		+
		wä	GL	80							+	+						+			+	+				+		+
		wä	GL	100							+	+									+	+						+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1396	potassium chlorate	wä	GL	20	+	+	+	+	+	+	+			+		-	+	+	+	+	+		+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+				+		-	+	+	+	+	+	+	+	+	+	+	
		wä	GL	60	0	+	+	+	+	+	+	+			+			+	+	+	+	+		+	+	+	+	+
		wä	GL	80							+	+						+	+	+	+	+						+
		wä	GL	100							+	+							+	+	+	+						
KClO3 ClKO3																												
1397	potassium chloride	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	
		wä	GL	60	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+		+	
		wä	GL	80			+	+	+	+	+	+		+	+	+		+	+	+	+	+		+	+		+	
		wä	GL	100					+	+	+	+						+	+	+	+	+					+	
KCl ClK																												
1398	potassium chlorite	wä	GL	20	+	+	+	+	+	+	+			+							+	+		+	+	+		+
		wä	GL	40		+	+	+	+	+	+				+						+	+		+	+	+		+
		wä	GL	60		+	+	+	+	+	+				+						+	+		+	+	+		+
		wä	GL	80					+	+	+																	
		wä	GL	100					+	+	+																	
KClO2 ClKO2																												
1399	potassium chromate	wä	GL	20	+	+	+	+	+	+	+	+	+	+		0	+	+	+	+	+	+		+	+	+		+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+		0	+	+	+	+	+		+	+	+		+
		wä	GL	60	+	+	+	+	+	+	+			+			-	+	+	+	+	+		+	+	+		+
		wä	GL	80					+	+	+										+	+		+	+	+		
		wä	GL	100					+	+	+										+	+						
K2CrO4 CrK2O4																												
1400	potassium cyanate	wä	GL	20						+	+													+	+	+		
		wä	GL	40						+	+													+	+	+		
		wä	GL	60						+	+													+	+	+		
		wä	GL	80						+	+																	
		wä	GL	100						+	+																	
KOCN CKNO																												

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	Material																							
					PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1401	potassium cyanide	wä	GL	20	+	+	+	+	-	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+		
		wä	GL	40	+	+	+	+	-	+	+	+	+	+	+	+	0	0	+	+	+	+	+	+	+	+		
		wä	GL	60	+	+	+		-	+	+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+		
		wä	GL	80						+	+	+				+			+	+						+		
		wä	GL	100						+	+					0				+							+	
KCN																												
CKN																												
1402	potassium fluoride	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
		wä	GL	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+		
		wä	GL	60		+	+		+	+	+		+		+	+	+	+	+	+	+	+	+	+	+	+		
		wä	GL	80					+	+	+				0	+	+	+	+	+						+		
		wä	GL	100					0	+	+								+	+								
KF																												
FK																												
1403	potassium hypochlorite	wä	13%	20	+	0	0	0	+	+	+			0		-	+	+	+	+	+	-	+	+	+	-		
		wä	13%	40	+	0	-	-	0	+	+				-		0	+	+	+	+	+	+	+	+	-		
		wä	13%	60	0				-	+	+								+	+								
		wä	13%	80						+	+								+									
		wä	13%	100						+	+								+									
KOCl																												
ClKO	P																											
1404	potassium iodate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
		wä	GL	40	+	+			+	+	+								+	+		+	+	+	+	+		
		wä	GL	60					+	+	+								+	+		+	+	+	+	+		
		wä	GL	80					+	+	+								+	+								
		wä	GL	100					+	+	+								+	+								
KIO3																												
IKO3																												
1405	potassium iodide	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+		
		wä	GL	60	+	+	+	+	+	+	+		+	+	+	-	+	+	+	+	+	+	+	+	+	+		
		wä	GL	80			+	+	+	+	+		+	+	+		+	+	+	+		+	+	+		+		
		wä	GL	100					+	+	+								+	+						+		
KI																												
IK																												

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1406	potassium metaborate	wä	GL	20	+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+			+		
		wä	GL	40	+	+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+			+		
		wä	GL	60		+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+			+		
		wä	GL	80						+	+	+									+	+		+	+			+		
		wä	GL	100						+	+	+									+	+						+		
1407	potassium nitrite	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+			+	
		wä	GL	40	+	+	+	+	+	+	+			+	+		+	+	+	+	+	+	+	+	+			+		
		wä	GL	60	0	+	+	+	+	+	+				+		0	+	+	+	+	+	+	+	+			+		
		wä	GL	80							+	+						0	+	+	+	+		+	+			+		
		wä	GL	100							+	+							+	+	+	+	+						+	
1408	potassium perchlorate	wä	VL	20	+	+	+	+	+	+	+	+		+		0	+	+	+	+	+	+		+	+	+			+	
		wä	VL	40	+	+	+	+	+	+	+	+			+		0	+	+	+	+	+			+	+			+	
		wä	VL	60	0		+	+	+	+	+	+			+		-	+	+	+	+	+		+	+	+			+	
		wä	VL	80							+	+									+	+							+	
		wä	VL	100							+	+									+	+								
		wä	GL	20	+	+	+	+	+	+	+	+	+		+		0	+	+	+	+	+	+		+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+	+	+		+		0	+	+	+	+	+	+		+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+	+			+			+	+	+	+	+	+		+	+	+			+
		wä	GL	80							+	+									+	+								+
		wä	GL	100							+	+									+	+								
1409	potassium permanganate	wä	6%	20	+	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+		+	+	+			+	
		potassium manganate(VII)	wä	6%	40	+	+	+	+	+	+	+		+	+		-	+	+	+	+	+	+		+	+	+			+
		wä	6%	60	0	0	0	0	+	+	+				0			+	+	+	+	+	+		+	+	+			+
		wä	6%	80					+	+	+										+	+								
		wä	6%	100							+	+									+	+								

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																							
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1410 potassium persulfate K2S2O8 K2O8S2	wä	GL	20	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1411 potassium dihydrogenphosphate KH2PO4 H2KO4P	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1412 potassium sulfate K2SO4 K2O4S	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1413 potassium sulfide K2S	wä	VL	20	+	+	+	+	0	+	+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+	+
	wä	VL	40	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	VL	60	0	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	VL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	VL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1414 potassium sulfite K2SO3 K2O3S	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1415	potassium L-tartrate	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+	+	
		wä	GL	40	+	+	+	+	+	+	+			+	+			+	+	+	+	+	+	+			+	+	
		wä	GL	60		+	+	+	+	+	+			+	+			+	+	+	+	+	+	+	+			+	+
		wä	GL	80						+	+										+	+						+	+
		wä	GL	100						+	+										+	+						+	+
1417	(+/)-borneol		TR	20	-	-	-	-	+	+	+			-		-	0	+	+		+		+	+	+			+	+
			TR	40					+	+	+										+		+	+	+				
			TR	60							+	+										+		+	+	+			
			TR	80							+	+										+		+	+	+			
			TR	100							+	+										+		+		+			
1420	sodium hexafluorosilicate	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+				+	+	+
		wä	GL	40	+	+	+	+	+	+	+			+	+		+	+	+	+	+	+	+	+			+	+	+
		wä	GL	60	0	+	+	+	0	+	+			+	+		+	+	+	+	+	+	+	+			+	+	+
		wä	GL	80					-	+	+										+	+							
		wä	GL	100							+	+									+	+							
1421	silicic acid	wä	GK	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	GK	40	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	
		wä	GK	60	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	
		wä	GK	80					+	+	+							+	+	+	+	+	+	+	+	+	+	+	
		wä	GK	100						+	+	+						+	+	+	+	+	+				+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GL = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
CO2	1423	carbon dioxide	gf	TR, GK	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			gf	TR, GK	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			gf	TR, GK	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			gf	TR, GK	80			+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+	
			gf	TR, GK	100				+	+	+							+	+	+	+	+	+	+	+	+	
			gf	TR, GK	120				+	+	+								+	+	+	+	+	+	+	+	
CO	1424	carbon monoxide	gf	TR, GK	20	+	+	+	+	+	+		+		+	+	+	+	+								
			gf	TR, GK	40	+	+	+	+	+	+		+		+	+	+	+	+								
			gf	TR, GK	60	+	+	+	+	+	+		+		+	+	+	+	+								
			gf	TR, GK	80			+	+	+	+		+				+	+	+								
			gf	TR, GK	100				+	+	+							+	+								
			gf	TR, GK	120				+	+	+								+								
aqua regia HCl 27%, HNO3 18%, H2O 55% P	1425	mixed acid: HCl 27%, HNO3 18%	wä		20	+	-	-	-	0	+	+	-		-	-	0	0	+	+	-	+		+	-	-	-
			wä		40	0				+	+					-				+		+		+			
			wä		60					+	+																
			wä		80					+	+																
			wä		100					+	+																
guajacol/cresol-mixture	1426	creosote			20	-				+	+		-		-	-			+	+		+	+	+	+	+	+
					40					+	+								+	+		+	+	+	+	+	+
					60					+	+								+	+		+	+	+	+	+	+
					80					+	+								+	+		+	+	+	+	+	+
					100					+	+									+		+		+	+	+	+
					120					+	+													+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1427	cresol (o-, m-, a. p-)	wä	GL	20	0	+	+	+	+	+	+		-	+		0	-	+	+	+	+		+	+	+	+	+	+
	methylphenol (o-, m-, a. p-)	wä	GL	40		+	+	+	+	+	+			+		0		+	+	+	+		+	+	+	+	+	+
		wä	GL	60			+	+	+	+	+			+						+	+		+	+	+	+	+	+
	CH3C6H4OH	wä	GL	80					0	+	+									+	+		+	+	+	+	+	+
	C7H8O	wä	GL	100						+	+									+	+		+		+	+	+	+
1428	cresol sulfonic acid	wä	GL	20	+	+				+	+					-	-	+	+	+	+	+	+	+	+			+
		wä	GL	40	+					+	+						0	0	+	+	+	+	+	+	+			+
		wä	GL	60	+					+	+									+	+		+	+	+			+
	CH3C6H3(OH)SO3H	wä	GL	80						+	+									+			+	+	+			+
	C7H8O4S	wä	GL	100						+	+									+								+
1429	copper(I) chloride	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+		+	+	+	0	+	+	+	+	+	+	+	+	+			+
	CuCl	wä	GL	80			+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+			+
	ClCu	wä	GL	100						+	+									+	+	+						+
1431	copper(II) acetate arsenate(III)	wä	GL	20	+	+	+	+		+	+			+		+	+	+	+									
	Schweinfurter Green	wä	GL	40		+	+	+		+	+			+		+	+	+	+									
		wä	GL	60						+	+					0	+	+	+									
	3Cu(AsO2)2 • Cu(CH3CO2)2	wä	GL	80						+	+						+	+	+									
	C4H6As6Cu4O16	wä	GL	100						+	+																	
1432	copper(II) carbonate basic	wä	GL	20	+	+	+	+		+	+		+	+		+	+	+	+	+	+	+	+	+	+			+
	copper(II) hydroxide carbonate	wä	GL	40	+	+	+	+		+	+		+	+		+	+	+	+	+	+	+	+	+	+			+
	copper(II) carbonate hydroxide	wä	GL	60		+	+	+		+	+			+		0	+	+	+	+	+	+	+	+	+			+
	CuCO3 • Cu(OH)2	wä	GL	80						+	+						+	+	+	+	+	+	+	+				+
	CH2Cu2O5	wä	GL	100						+	+									+	+							+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																					
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301
1433 CuCl2 Cl2Cu	copper(II) chloride	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1434 CuCN CCuN	copper(I) cyanide	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1435 Cu(NO3)2 CuN2O6	copper(II) nitrate	wä	30%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	60	0	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
		wä	30%	80	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	30%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	50%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	50%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	50%	60	0	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
		wä	50%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	50%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1436	copper(II) sulfate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1437	copper(II) fluoride	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+
		wä	VL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1438	copper tetramine compounds	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+
		wä	VL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1439	D(+)-lactose	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1440	lanolin	20	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+
		40	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	-	0	0	0	+	+	+	+	+	0	+	+	+	+	+	+	+	+
		80	-				+	+	+					-	-	-	-	+		+
		100	-				+	+	+					-	-	-	-	+		+
		120	-				+	+	+					-	-	-	-	+		+
1441	latex	20		+	+	+		+	+			+		+		+	+			
		40		+	+	+		+	+			+								
		60		+	+	+		+	+			+								
		80						+	+											+
		100						+	+											
1442	lauric acid dodecanoic acid CH ₃ (CH ₂) ₁₀ CO ₂ H C ₁₂ H ₂₄ O ₂	20					+	+	+										+	+
		40					+	+	+										+	+
		60					+	+	+										+	+
		80					+	+	+										+	+
		100					+	+	+											
		120					+													
1443	lauroyl chloride lauric acid chloride dodecanoyl chloride CH ₃ (CH ₂) ₁₀ COCl C ₁₂ H ₂₃ ClO	20	-				+	+	+									+	+	+
		40					+	+	+									+	+	+
		60					+	+	+									+	+	+
		80					+	+	+									+	+	+
		100					+	+	+									+	+	+
		120						+	+											

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1444 lauryl alcohol 1-dodecanol CH3(CH2)11OH C12H26O	TR	20	+				+	+	+						-	+	+	+	+		+	+	+	+	+	+
	TR	40	+				+	+	+						-	+	+	+	+		+	+	+	+	+	+
	TR	60	+				+	+	+									+	+		+	+	+	+	+	+
	TR	80						+	+									+	+		+	+	+	+	+	+
	TR	100						+	+									+	+		+		+	+	+	+
	TR	120						+	+										+		+		+	+	+	+
1446 cod-liver oil fish liver oil		20	+	+	+	+		+	+			+			-			+	+		+	+	+	+	+	+
		40		+				+	+									+	+		+	+	+	+	+	+
		60		0				+	+									+	+		+	+	+	+	+	+
		80						+	+										+		+	+	+	+	+	+
		100						+	+									+	+		+		+	+	+	+
		120						+	+										+		+		+	+	+	+
1447 light petrol petroleum ether benzine P	TR	20	+	+	+	+	+	+	+		+	+		+	-	+	+	+	+		+	+	+	+	+	+
	TR	40	+	0	0	0	+	+	+		+	0		0		+	+	+	+		+	+	+	+	+	+
	TR	60	+	-	-	-	+	+	+			-		-		0	0	+	+		+	+	+	+	+	+
	TR	80					+	+	+							-	-	+	+		+	+	+	+	+	+
	TR	100					+	+	+									+	+		+	+	+	+	+	+
	TR	120					+	+	+									+	+		+		+	+	+	+
1448 light oil		20					+	+	+									+	+		+	+	+	+	+	+
		40					+	+	+									+	+		+	+	+	+	+	+
		60					+	+	+									+	+		+	+	+	+	+	+
		80						+	+										+		+	+	+	+	+	+
		100						+	+										+		+		+	+	+	+
		120						+	+										+		+		+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																							
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1450	linseed oil	20	+	+	+	+	+	+	+	+	+		+	+	0	+	+	+	+		+	+	+	+	+	+
		40	0	+	+	+	+	+	+	+	+		+	+	-	+	+	+	+		+	+	+	+	+	+
		60	-	+	+	+	+	+	+	+	+		+	+		+	+	+	+		+	+	+	+	+	+
		80		-	+	+	+	+	+	+		+							+		+	+	+	+	+	+
		100			+	+	+	+	+	+		+							+		+		+	+	+	+
		120					+												+		+		+	+	+	+
1451	lighting gas, benzene-free	gf	GK	+	+	+	+	+	+	+	+			+	+	-	+	+						+	+	+
		gf	GK	40	+					+	+															
		gf	GK	60						+	+															
		gf	GK	80						+	+															
		gf	GK	100						+	+															
1452	liqueurs		H	20	+	+	+	+	+	+	+			+	+	+	+	+						+	+	+
			H	40	+	+			+	+	+															
			H	60					+	+	+															
			H	80					+	+	+															
			H	100						+	+															
1453	linoleic acid cis,cis-9,12-octadecadienoic acid H3C(CH2)4CH=CHCH2CH=CH(CH2)7CO2H C18H32O2		TR	20					+	+	+					-		+	+		+	+	+	+	+	+
			TR	40					+	+	+							+	+		+	+	+	+	+	+
			TR	60					+	+	+							+	+		+	+	+	+	+	+
			TR	80					+	+	+								+		+	+	+	+	+	+
			TR	100					+	+	+								+		+		+	+	+	+
			TR	120					+	+	+								+		+		+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1455	lithium bromide	wä	GL	20	+	+	+	+	+	+	+	-	+	+	+		+	+	+	+	+	+	+	+	+			+	
		wä	GL	40	+	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+			+	
		wä	GL	60		+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+			+	
		wä	GL	80						+	+	+							+	+	+	+		+	+			+	
		wä	GL	100						+	+	+									+	+						+	
1456	lithium carbonate	wä	GL	20	+	+	+	+	-	+	+	-	+	+				+	0	0	+	+		+	+	+			+
		wä	GL	40	+	+	+	+	-	+	+		+	+				+	-	-	+	+		+	+	+			+
		wä	GL	60	0	+	+		-	+	+				+						+	+			+				+
		wä	GL	80						+	+											+							+
		wä	GL	100						+	+											+							+
1457	lithium chloride	wä	GL	20	+	+	+	+	+	+	+	-	+	+	+		+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+	+			+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+	+	+	+	+				+			+	+	+	+	+	+	+	+	+			+
		wä	GL	80					+	+	+								+	+	+	+		+	+	+			+
		wä	GL	100					+	+	+										+	+							+
1459	lithium hydroxide	wä	GL	20	+	+	+	+	-	+	+	-		+			+	-	-	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+		+	+			+				+			+	+	+	+	+	+			+
		wä	GL	60		+	+			+	+			+						+	+	+	+	+					+
		wä	GL	80				-		+	+											+	+		+	+			+
		wä	GL	100						+	+											+							
1460	lithium sulfate	wä	GL	20	+	+	+	+	+	+	+	-	+	+	+		+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+	+			+	+	+	+	+	+	+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+			+				+	+	+	+	+	+	+	+	+			+
		wä	GL	80					+	+	+								+	+	+	+		+	+	+			+
		wä	GL	100					+	+	+										+	+							+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																					
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2
1461	air	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		120	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1462	magnesium carbonate basic 4MgCO3 • Mg(OH)2	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1463	magnesium chloride MgCl2 Cl2Mg	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

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UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1464	wä	magnesium fluoride	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+		
			40	+	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+			+		
			60		+	+		+	+	+	+			+				+	+	+	+	+	+				+		
			80					+	+	+	+							+	+	+	+						+		
			100					+	+	+	+									+	+						+		
1465	wä	magnesium hydroxide	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+		+	+	+	+	+			+	
			40		+	+	+	+	+	+			+	+		+	+	+	+	+		+	+	+	+			+	
			60		+	+		+	+	+			+	+				+	+	+	+		+		+			+	
			80					+	+	+								+	+	+	+				+			+	
			100					+	+	+											+							+	
1466	wä	magnesium nitrate	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+			+	
			40	+	+	+	+	+	+	+			+	+		+	+	+	+	+	+	+	+	+	+			+	
			60	+	+	+	+	+	+	+			+	+		+	+	+	+	+	+	+		+	+	+			+
			80					+	+	+								+	+	+	+	+		+	+	+			+
			100					+	+	+											+	+						+	
1467	wä	magnesium oxide	20	+	+	+	+	+	+	+		+	+				+	+	+	+	+	+	+	+	+			+	
			40	+	+	+	+	+	+	+			+	+				+	+	+	+	+	+	+	+			+	
			60		+	+	+	+	+	+			+	+				+	+	+	+	+	+	+	+			+	
			80						+	+											+	+		+	+	+			+
			100							+	+										+	+						+	

MgF2

F2Mg

Mg(OH)2

H2MgO2

Mg(NO3)2

MgN2O6

MgO

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																					
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301
1468 MgSO4 MgO4S	magnesium sulfate	wä 10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1469 MgSO3 MgO3S	magnesium sulfite	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1470 cis-2-butene-1,4-dioic acid HO2CCH=CHCO2H C4H4O4	maleic acid	wä GL	20	+	+	+	+	+	+	+	+	+	+	-	0	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+
		wä GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80					+	+	+	+	+	+	+	+	-	-	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1471 MnCl2 Cl2Mn	manganese(II) chloride	wä GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä GL	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3
1472	manganese dioxide	TR	20	+				+	+					+	+	+	+				
		TR	40					+	+					+	+	+	+				
		TR	60					+	+					+	+	+	+				
		TR	80					+	+						+						
		TR	100					+	+												
1473	manganese(II) sulfate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+
1474	marmelade		20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			40	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			80			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			100					+	+	+	+	+	+	+	+	+	+	+	+	+	+
1476	molasses		20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			80					+	+	+	+	+	+	+	+	+	+	+	+	+	+
			100					+	+	+	+	+	+	+	+	+	+	+	+	+	+
1477	methane	gf	TR, GK	20	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+
		gf	TR, GK	40				+	+	+	+	+	+	+				+			+
		gf	TR, GK	60				+	+	+	+	+	+	+				+			+
		gf	TR, GK	80				+	+	+	+	+	+	+				+			+
		gf	TR, GK	100				+	+	+	+	+	+	+				+			+

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1478 malonic acid	wä	GL	20	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	propanedioic acid	GL	40		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	methanedicarboxylic acid	GL	60		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	CH ₂ (CO ₂ H) ₂	GL	80					+	+									+	+	+
	C ₃ H ₄ O ₄	GL	100					+	+									+	+	+
1479 methanol		TR	20	+	+	+	+	+	+	-	+	+		-	+	-	+	+	+	+
	methyl alcohol	TR	40	+	+	+	+	+	+		+	+			+		+	+	+	+
		TR	60	0	+	+	+	+	+			+		0			+	+	+	+
	CH ₃ OH																			
	CH ₄ O	P																		
1480 methanesulfonic acid	wä	73%	20				+	+	+	-				-		+	+	+	+	+
	wä	73%	40				+	+	+							+	+	+	+	+
	wä	73%	60				+	+	+							+	+	+	+	+
	wä	73%	80				+	+	+							+	+	+	+	+
	wä	73%	100					+	+								+	+		
		TR	20	0	+	0	0	+	+	+	-	-	0		-		+	+	+	+
		TR	40			-	-	+	+	+			-			-	+	+	+	+
		TR	60				0	+	+								+	+	+	+
		TR	80				0	+	+								+	+	+	+
		TR	100					+	+								+			
1481 methyl acetate		TR	20	-	+	+	+	+	+	-	-	+		-	-	-	-	+	+	+
	acetic acid methyl ester	TR	40		0	0	0	0	+	+		0					+	+	+	+
		TR	60		-	-	-	-	+	+			-				+	+	+	+
	CH ₃ CO ₂ CH ₃																			
	C ₃ H ₆ O ₂	P																		

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Chemical Resistance

Release Date: 2023-02-17

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1482	methylamine	wä	32%	20	0	+	+	+	0	+	+			+		-	+	-	-	+	+	+	+	+	+		+	+
	aminomethane	wä	32%	40						+	+									+	+		+	+	+		+	+
		wä	32%	60						+	+										+		+	+	+			+
	CH3NH2																											
	CH5N																											
1483	methylbromide	gf	TR, GK	20	-	0	-	-	+	+	+			-		-	-	+	+	+								
	bromomethane	gf	TR, GK	40		-			+	+	+									+								
		gf	TR, GK	60		-			+	+	+									+								
		gf	TR, GK	80					+	+	+									+								
	CH3Br	gf	TR, GK	100					+	+	+																	
1484	methyl chloride	gf	TR, GK	20	-	0	-	-	+	+	+			-		-	-	-	-	+								
	chloromethane	gf	TR, GK	40					+	+	+									+								
		gf	TR, GK	60					+	+	+									+								
		gf	TR, GK	80					+	+	+									+								
	CH3Cl	gf	TR, GK	100					+	+	+																	
1485	methylcyclohexane		TR	20		0	-	-		+	+			-			-			+	+		+	+	+	+	+	+
	hexahydrotoluene		TR	40		0				+	+									+	+		+	+	+	+	+	+
			TR	60						+	+									+	+		+	+	+	+	+	+
	C6H11CH3		TR	80						+	+									+	+		+	+	+	+	+	+
	C7H14		TR	100						+	+									+	+		+	+	+	+	+	+
1487	methyl formate		TR	20	-					+	+	-	-							+	+		+	+	+	+	+	+
	formic acid methyl ester		TR	40						+	+									+	+		+	+	+	+	+	+
	HCO2CH3																											
	C2H4O2																											

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Chemical Resistance

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Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1488	methyl isobutyl ketone (MIBK)	TR	20	-					+	+	-	-					-	-	+	+		+	+	+	+	+	+
	4-methyl-2-pentanone	TR	40						+	+									+	+		+	+	+	+	+	+
	isobutyl methyl ketone	TR	60						+	+									+	+		+	+	+	+	+	+
	(CH3)2CHCH2COCH3	TR	80						+	+										+		+	+	+	+	+	+
	C6H12O																										
1489	methyl methacrylate	TR	20	-							-	-							+	+		+	+	+	+	+	+
	methacrylic acid methyl ester	TR	40																+	+		+	+	+	+	+	+
		TR	60																+	+		+	+	+	+	+	+
	CH2=C(CH3)CO2CH3	TR	80																	+		+	+	+	+	+	+
	C5H8O2																										
1490	methyl salicylate	TR	20	-	+	+	+		+	+	-	-	+						+	+		+	+	+	+	+	+
	salicylic acid methyl ester	TR	40		+	+	+		+	+			+						+	+		+	+	+	+	+	+
	2-hydroxybenzoic acid methyl ester	TR	60						+	+									+	+		+	+	+	+	+	+
	2-(OH)C6H4CO2CH3	TR	80						+	+										+		+	+	+	+	+	+
	C8H8O3	TR	100						+	+										+		+		+	+	+	+
1491	dimethyl sulfate	TR	20	-					+	+	-	-			-	-	0	0	+	+		+	+	+	+	+	+
	sulfuric acid dimethyl ester	TR	40						+	+									+	+		+	+	+	+	+	+
		TR	60						+	+									+	+		+	+	+	+	+	+
	(CH3O)2SO2	TR	80						+	+										+					+	+	+
	C2H6O4S	TR	100						+	+										+					+	+	+
1492	milk		20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
			40	+	+	+	+	+	+	+	+	+	+				+	+	+	+	+	+	+	+	+	+	+
			60	+	+	+	+	+	+	+		+	+						+	+	+	+	+	+	+	+	+
			80			+	+	+	+	+			+						+	+	+	+	+	+	+	+	+
			100					+	+	+									+	+	+	+		+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1493	lactic acid	wä 10%	20	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä 10%	60		+	+	+	0	+	+		+			0	0	0	+	+		+	+	+	+	+	+
		wä 10%	80			+	+	0	+	+		+			-	0	0	+	+							
		wä 10%	100					-	+	+								+	+							
		wä 25%	20	+	+	+	+	+	+	+		+		-	+	+	+	+	+	+	+	+	+			+
		wä 25%	40	+	+	+	+	+	+	+		+			+	+	+	+	+	+	+	+	+			+
		wä 25%	60		+	+	+		+	+		+						+	+		+	+	+			+
		wä 25%	80						+	+								+	+							
		wä 25%	100						+	+								+	+							
		wä 50%	20	+	+	+	+	+	+	+		+		-	+	+	+	+	+	+	+	+	+			+
		wä 50%	40	+	+	+	+	+	+	+		+			+	+	+	+	+	+	+	+	+			+
		wä 50%	60		+	+	+		+	+		+						+	+		+	+	+			+
		wä 50%	80						+	+								+	+							
		wä 50%	100						+	+								+	+							
		wä 90%	20	+	+	+	+	+	+	+		+		-	+	+	+	+	+		+	+	+	-	+	+
		wä 90%	40	0	+	+	+	+	+	+		+			+	+	+	+	+		+	+	+		+	+
		wä 90%	60		+	+	+		+	+		+						+	+		+		+		+	+
		wä 90%	80						+	+								+	+							
		wä 90%	100						+	+								+	+							
1494	mineral oils		20	+	+	+	+	+	+	+		+		+	-	+	+	+	+	+	+	+	+	+	+	+
			40	+	+	+	+	+	+	+		+		+		+	+	+	+	+	+	+	+	+	+	+
			60	+	0	0	0	+	+	+		0		+		+	+	+	+	+	+	+	+	+	+	+
			80					+	+	+									+		+	+	+	+	+	+
			100			-	-	+	+	+			-						+		+		+	+	+	+
			120					+	+	+									+		+		+	+	+	+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1495	mixed acid: HNO3 20%, H2SO4 10%	wä		20	+	0	-	-	+	+	+	-				-	+	+	+	+	+		+	+	+	+	+	+
		wä		40	+				+	+	+							+	+	+	+		+	+	+	+	+	+
		wä		60					+	+	+								+	+	+	+		+	+	+	+	+
		wä		80					+	+	+																	
		wä		100							+	+																
1496	mixed acid: HNO3 87%, H2SO4 10%	wä		20	-	-	-	-	0	+	+	-	-	-		-	-	-	-			-						
		wä		40						+	+																	
		wä		60						+	+																	
		wä		80						+	+																	
		wä		100						+	+																	
1497	mixed acid: H2SO4 50%, HNO3 33%	wä		20	+	-	-	-	+	+	+	-	-	-		-				+	+	-	+		+			
		wä		40	0					+	+										+	+		+		+		
		wä		60						+	+										+	+		+		+		
		wä		80						+	+																	
		wä		100						+	+																	
1498	mixed acid: H2SO4 50%, HNO3 50%			20	-	-	-	-	+	+	+	-	-	-		-	-	-	-			-						
				40						+	+																	
				60						+	+																	
				80						+	+																	
				100						+	+																	

HNO3 20%, H2SO4 10%, H2O 70%
P

HNO3 87%, H2SO4 10%, H2O 3%
P

H2SO4 50%, HNO3 33%, H2O 17%
P

H2SO4 50%, HNO3 50%, H2O 0%
P

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1499	mixed acid: H2SO4 18%, HNO3 15%, HF 5%	wä		20	+	0	-	-	+	+	+	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	
		wä		40					+	+	+								+	+	+							
		wä		60					+	+	+									+	+							
		wä		80						+	+	+									+							
		wä		100						+	+	+									+							
H2SO4 18%, HNO3 15%, HF 5%, H2O 62%																												
P																												

1500	mixed acid: HNO3 50%, HF 10%	wä		20		-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	
		wä		40					+	+	+								+	+	+							
HNO3 50%, HF 10%, H2O 40%																												
P																												

1501	monochloroacetic acid ethyl ester		TR	20	-	+	+	+		+	+	-	-	+		-	0	0	0	+			+	+	+	+	+	
			TR	40		+	+	+		+	+			+						+			+	+	+	+	+	
			TR	60		+	+	+		+	+			+						+			+	+	+	+	+	
			TR	80						+	+												+	+	+	+	+	
			TR	100						+	+												+		+	+	+	
chloroacetic acid ethyl ester																												
ethyl chloroacetate																												
ClCH2CO2C2H5																												
C4H7ClO2																												

1502	monochloroacetic acid methyl ester		TR	20	-	+	+	+		+	+	-	-	+		-	+	0	0	+	+		+	+	+	+	+	
			TR	40		+	+	+		+	+			+						+	+		+	+	+	+	+	
			TR	60		+	+	+		+	+			+						+	+		+	+	+	+	+	
			TR	80						+	+												+		+	+	+	
			TR	100						+	+												+		+		+	
chloroacetic acid methyl ester																												
methyl chloroacetate																												
ClCH2CO2CH3																												
C3H5ClO2																												

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1503	mixed acid: HNO3 59%, HF 4,5%	wä		20		-	-	-	+	+	+	-	-	-		-	-		+	+	+		-	-	-	-	-	-
		wä		40					+	+	+								+	+	+							
HNO3 59%, HF 4,5%, H2O 36,5%																												
P																												
1505	morpholine		TR	20	-	+	+	+	+	+	+	-	-	+		-	0			+	+		+	+	+	+	+	+
			TR	40		+	+	+	0	+	+		-	+						+	+		+	+	+	+	+	+
			TR	60		+	+	+		+	+		-	+						+	+		+	+	+	+	+	+
			TR	80						+	+											+				+	+	+
			TR	100						+	+											+				+	+	+
tetrahydro-1,4-oxazine																												
C4H9NO																												
1506	mixed acid: H2SO4 25%, HNO3 25%, HF 10%	wä		20	+	-	-	-	+	+	+	-	-	-		-		+	+	+	+		-	-	-	-	-	-
		wä		40					+	+	+								+	+	+	+						
		wä		60					+	+	+										+	+						
		wä		80						+	+											+						
		wä		100						+	+											+						
H2SO4 25%, HNO3 25%, HF 10%, H2O 40%																												
P																												
1507	naphthalene		TR	20	-	+	+	+	+	+	+		-	+		+	-	+	+							+	+	
			TR	40		0	0	0	+	+	+			0		+		+	+							+	+	
			TR	60		0	-	-	0	+	+			-		+		+	+							+	+	
			TR	80						+	+															+	+	
			TR	100						+	+															+	+	
C10H8																												

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1508	naphthalene sulfonic acid (mixture of isomers)		TR	20	+	+				+	+					0		+	+									
			TR	40							+	+					0		+	+								
			TR	60							+	+					-		-	-								
			TR	80							+	+																
			TR	100							+	+																
1509	sodium acetate	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+			+
		acetic acid sodium salt	wä	GL	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+
			wä	GL	60		+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+			+
		CH3CO2Na	wä	GL	80			+	+	+	+	+			+			0	0	0	+	+		+	+	+		+
		C2H3NaO2	wä	GL	100					0	+	+									+	+						+
1510	sodium aluminate	wä	VL	20	+	+	+	+		+	+			+			+			+	+		+	+	+			
			wä	VL	40	+	+	+	+		+	+			+			+			+	+		+	+	+		
			wä	VL	60	0	+	+			+	+			+			+			+	+		+		+		
		Na3[Al3O2(OH)8]	wä	VL	80			+			+	+			+						+	+		+		+		
		H8Al3Na3O10	wä	VL	100						+	+									+	+						
1511	sodium arsenate	wä	GL	20						+	+													+	+	+		
			wä	GL	40						+	+												+	+	+		
			wä	GL	60						+	+												+		+		
		Na3AsO4	wä	GL	80						+	+														+		
		AsNa3O4	wä	GL	100						+	+																

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1512	sodium arsenite	wä	GL	20	+	+	+	+		+	+			+														
		wä	GL	40							+	+																
		wä	GL	60							+	+																
		wä	GL	80							+	+																
		wä	GL	100							+	+																
1513	sodium hydrogencarbonate	wä	GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	0	+	+		+	+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	100							+	+									+	+						+
1514	sodium dichromate	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+		+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+			+	+	+	+	+		+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+		+	+			+	+	+	+	+		+	+	+			+
		wä	GL	80					+	+	+									+	+		+	+	+			+
		wä	GL	100					+	+	+										+	+						+
1515	sodium hydrogensulfate	wä	10%	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
		wä	10%	40	+	+	+	+	+	+	+			+		0	+	+	+	+	+	+	+	+	+			+
		wä	10%	60	0	+	+	+	+	+	+			+		-	+	+	+	+	+	+	+	+	+			+
	sodium bisulfate	wä	10%	80					+	+	+						0	+	+	+	+	+		+	+	+		+
		wä	10%	100					+	+	+							+	+	+	+	+					+	
		wä	50%	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
	NaHSO4	wä	50%	40	0	+	+	+	+	+	+			+		0	+	+	+	+	+	+	+	+	+			+
		wä	50%	60		+	+	+	+	+	+			+		-	+	+	+	+	+	+	+	+	+			+
		wä	50%	80					+	+	+						0	+	+	+	+	+		+	+	+		+
HNaO4S	wä	50%	100					+	+	+								+	+	+	+						+	

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1517	sodium hydrosulfide	wä		20	+	+	+	+	+	+	+			+		0	+	0	0							+	+	+
	sodium bisulfide	wä		40	0	+	+	+	+	+	+			+			+	-	-							+	+	+
		wä		60		+	+	+	+	+	+			+			+									+	+	+
	NaSH	wä		80					+	+	+																	
	HNaS	wä		100					+	+	+																	
1518	sodium hydrosulfite	wä	10%	20	+	+	+	+	+	+	+	+	+	+		-	+	+	+	+	+		+	+	+	+	+	+
	sodium bisulfite	wä	10%	40	+	+	+	+	+	+	+	+	+	+			+	-	+	+	+		+	+	+	+	+	+
		wä	10%	60	0	+	+	+	+	+	+			+			+		+	+	+		+	+	+	+	+	+
	NaHSO3	wä	10%	80			+	+	+	+	+			+			0			+	+		+	+	+			+
	HNaO3S	wä	42% (GL)	20	+	+	+	+	+	+	+	+	+	+		-	+	+	+	+	+		+	+	+	+	+	+
		wä	42% (GL)	40	+	+	+	+	+	+	+	+	+	+			+	0	+	+	+		+	+	+	+	+	+
1519	sodium perborate	wä	GL	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+			+
	sodium peroxoborate	wä	GL	40	+	+	+	+	+	+	+	+	+	+		0	+	0	0	+	+		+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+			+			+	-	-	+	+		+	+	+			+
	NaBO3	wä	GL	80			+	+	+	+	+			+			0				+		+	+	+			+
	BNaO3	wä	GL	100					+	+	+										+							+
1520	sodium bromate	wä	GL	20	+	+	+	+	+	+	+			+		+	+	+	+				+	+	+			
		wä	GL	40	0	0	0	0	+	+	+			0		0	+	+	+				+	+	+			
		wä	GL	60					+	+	+					-	+	+	+				+	+	+			
	NaBrO3	wä	GL	80					+	+	+																	
	BrNaO3	wä	GL	100					+	+	+																	

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1521	sodium bromide	wä	10%	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+			+		
		wä	10%	40	+	+	+	+	+	+	+		+	+	+	+	0	+	+	+	+	+	+	+			+		
		wä	10%	60	0	+	+	+	+	+	+			+	+	+		+	+	+	+	+	+	+			+		
		wä	10%	80			+	+	+	+	+			+	+	+			+	+	+	+	+	+			+		
		wä	10%	100						+	+	+							+	+	+	+	+				+		
		wä	48% (GL)	20	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+			+	
		wä	48% (GL)	40	+	+	+	+	+	+	+	+		+	+	+	+	0	+	+	+	+	+	+	+			+	
		wä	48% (GL)	60	0	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+			+	
		wä	48% (GL)	80			+	+	+	+	+	+		+	+	+				+	+	+	+	+	+			+	
		wä	48% (GL)	100						+	+	+										+	+					+	
1522	sodium carbonate	wä	10%	20	+	+	+	+	0	+	+		+	+		+	+	+	+	+	+	+		+	+	+		+	
		wä	10%	40	+	+	+	+	-	+	+			+	+			+	0	0	+	+		+	+	+		+	
		wä	10%	60	0	+	+				+	+		+	+			+	-	-	+	+		+		+		+	
		wä	10%	80			+				+	+			+			+			+	+			+			+	
		wä	10%	100							+	+										+						+	
		wä	GL	20	+	+	+	+	0	+	+			+	+		+	+	+	+	+	+	+		+	+	+		+
		wä	GL	40	+	+	+	+	-	+	+			+	+			+	0	0	+	+		+	+	+		+	
		wä	GL	60	0	+	+				+	+			+			+	-	-	+	+		+		+		+	
		wä	GL	80			+				+	+			+			+			+	+			+			+	
		wä	GL	100							+	+										+						+	
1524	sodium chlorate	wä	GL	20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+		+	+	+	+	+	
		wä	GL	40	+	+	+	+	+	+	+				+		0	+	+	+	+	+		+	+	+	+	+	
		wä	GL	60	0	+	+	+	+	+	+				+		-	+	+	+	+	+		+	+	+	+	+	
		wä	GL	80					0	+	+							0	+	+	+	+					+	+	
		wä	GL	100							+	+						-			+	+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																			
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor
1525	sodium chloride	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		table salt	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		brine	wä	10%	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		NaCl	wä	10%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		CINa	wä	10%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	26% (GL)	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	26% (GL)	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	26% (GL)	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	26% (GL)	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	26% (GL)	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1526	sodium chlorite	wä	10%	20	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	10%	60	+	+	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+
		NaClO2	wä	10%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		CINaO2	wä	10%	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	50%	20	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	50%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	50%	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	50%	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1527	sodium chromate	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			wä	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		Na2CrO4	wä	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		CrNa2O4	wä	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1528	sodium citrate	wä	VL	20	+	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+			+	
	trisodium citrate	wä	VL	40	+	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+			+	
	citric acid trisodium salt	wä	VL	60		+	+	+	+	+	+		+	+							+	+	+		+			+	
	HOC(CO2Na)(CH2CO2Na)2	wä	VL	80						+	+									+	+							+	
	C6H5Na3O7	wä	VL	100						+	+										+								
1529	sodium cyanide	wä	GL	20	+	+	+	+	-	+	+		+	+		+	+	+	+	+	+	+		+	+	+			+
		wä	GL	40	+	+	+	+	-	+	+		+	+			+	0	0	+	+		+	+	+			+	
		wä	GL	60	+	+	+		-	+	+		+	+			+	-	-	+	+		+		+			+	
	NaCN	wä	GL	80			+			+	+			+			+			+	+							+	
	CNNa	wä	GL	100						+	+										+							+	
1530	sodium fluoride	wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60		+	+		+	+	+			+		0	+	+	+	+	+	+	+	+	+			+	
	NaF	wä	GL	80					+	+	+									+	+							+	
	FNa	wä	GL	100					0	+	+									+	+							+	
1531	sodium formate	wä	GL	20		+	+	+		+	+		+	+			+			+	+		+	+	+			+	
	formic acid sodium salt	wä	GL	40		+	+	+		+	+		+	+			+			+	+		+	+	+			+	
		wä	GL	60		+	+	+		+	+			+						+	+		+	+	+			+	
	HCO2Na	wä	GL	80						+	+									+	+		+	+	+			+	
	CHNaO2	wä	GL	100						+	+									+	+							+	
1533	sodium hypophosphite	wä	GL	20	+	+	+	+		+	+			+			+			+	+	+	+	+	+			+	
	sodium phosphinate	wä	GL	40	+	+	+	+		+	+			+			+			+	+	+	+	+	+			+	
		wä	GL	60	0	+	+	+		+	+			+						+	+		+	+	+			+	
	NaH2PO2	wä	GL	80						+	+									+	+		+	+	+			+	
	H2NaPO2	wä	GL	100						+	+									+	+							+	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																								
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1534 NaI INa	sodium iodide	20	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+			+
		40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+			+
		60	0	+	+	+	+	+	+		+	+	+	0	+	+	+	+	+	+	+	+	+			+
		80			+	+	+	+	+			+	+			+	+	+	+	+	+	+	+			+
		100					+	+	+										+	+	+					+
1535 lactic acid sodium salt CH3CH(OH)CO2Na C3H5NaO3	sodium lactate	20	+	+	+	+		+	+			+			+			+	+	+	+	+	+			+
		40		+	+	+		+	+			+			+			+	+	+	+	+	+			+
		60						+	+									+	+	+	+	+	+			+
		80						+	+									+	+							+
		100						+	+									+	+							+
1536 NaNO3 NNaO3	sodium nitrate	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+			+
		40	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+			+
		60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+		+	+	+			+
		80					+	+	+		+							+	+		+	+	+			+
		100					+	+	+		+							+	+							+
1537 NaNO2 NNaO2	sodium nitrite	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+			+
		40	+	+	+	+	+	+	+		+	+		0	+	+	+	+	+	+	+	+	+			+
		60		+	+	+	+	+	+		+	+		-	+	+	+	+	+	+	+	+	+			+
		80					+	+	+		0					+	+	+	+	+		+	+	+		+
		100					+	+	+									+	+							+
1538 NaClO4 ClNaO4	sodium perchlorate	20	+	+	+	+	+	+	+			+		0	+	+	+	+	+		+	+	+			+
		40	+	+	+	+	+	+	+			+		0	+	+	+	+	+		+	+	+			+
		60		+	+	+	+	+	+			+		0	+	+	+	+	+		+	+	+			+
		80						+	+						+	+	+	+	+							+
		100						+	+									+	+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1539	sodium peroxide	wä	GL	20	+	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1540	sodium persulfate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1541	sodium phosphate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+
1542	sodium silicate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	0	+	+	+	+	+	+	+	0	0	+	+	+
		wä	GL	80	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1543	sodium sulfate	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	60	0	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	80			+	+	+	+	+	+			+	+		+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	100						+	+	+									+	+	+	+	+	+	+	+	
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+	+			+	+		+	+	+	+	+	+	+	+	+	+	+	+
wä	GL	100						+	+	+										+	+	+		+	+	+	+		
1544	sodium sulfide	wä	GL	20	+	+	+	+	0	+	+			+		+	+					+	+	+	+	+		+	+
		wä	GL	40	+	+	+	+	0	+	+			+		+	+					+	+	+	+	+		+	+
		wä	GL	60	0	+	+	+	0	+	+			+		+	+					+		+	+	+		+	+
		wä	GL	80							+	+					0	+				+						+	+
		wä	GL	100							+	+					0					+							+
1545	sodium sulfite	wä	GL	20	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+			+	+	0	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+			+			-	+	+	+	+	+	+	+	+	+			+
		wä	GL	80			+	+	+	+	+			+							+		+	+	+	+			+
		wä	GL	100						+	+	+									+		+						+
1546	sodium tetraborate	wä	GL	20	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+	+			+	+		+	+	+	+	+		+	+	+	+	+	+
		wä	GL	100						+	+	+									+	+					+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

1547	soda lye		wä	3%	20	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	0	0	+
sodium hydroxide			wä	3% <td>40</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td>	40	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+
caustic soda			wä	3% <td>60</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td>	60	+	+	+	0		+	+		+	+	+		+	+	+		+			+
NaOH			wä	3% <td>80</td> <td></td> <td></td> <td>+</td> <td>0</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td>	80			+	0		+	+		+	+	+		+			+	+			+
HNaO			wä	3% <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	100						+	+													
			wä	5% <td>20</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td>0</td> <td>+</td>	20	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	0	0	+
			wä	5% <td>40</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	40	+	+	+	+		+	+		+	+	+	+	0	+	+	+	+	+	+	+
			wä	5% <td>60</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	60	+	+	+	0		+	+		+	+	+		+			+	+	+	+	
			wä	5% <td>80</td> <td></td> <td></td> <td>+</td> <td>-</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td>	80			+	-		+	+		+	+	+		+			+	+			+
			wä	5% <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	100						+	+													
			wä	10% <td>20</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td>0</td> <td>+</td>	20	+	+	+	+	-	+	+		+	+	+	+	+	+	+	+	+	0	0	+
			wä	10% <td>40</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>-</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	40	+	+	+	+		+	+		+	+	+	+	+	-	-	+	+	+	+	+
			wä	10% <td>60</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	60	+	+	+			+	+		+	+	+		+			+	+	+	+	
			wä	10% <td>80</td> <td></td> <td></td> <td>+</td> <td>-</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td>	80			+	-		+	+		+	+	+		+			+	+			+
			wä	10% <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	100						+	+													
			wä	15% <td>20</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td>0</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	20	+	+	+	+	-	+	+		+	+	+	+	+	0	0	+	+	+	+	+
			wä	15% <td>40</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>-</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	40	+	+	+	+		+	+		+	+	+	+	+	-	-	+	+	+	+	+
			wä	15% <td>60</td> <td>0</td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	60	0	+	+			+	+		+	+	+		+			+	+	+	+	
			wä	15% <td>80</td> <td></td> <td></td> <td>+</td> <td>-</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td>	80			+	-		+	+		+	+	+		+			+	+			+
			wä	15% <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	100						+	+													
			wä	25% <td>20</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>0</td> <td>0</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	20	+	+	+	+	-	+	+		+	+	+	+	+	0	0	+	+	+	+	+
			wä	25% <td>40</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>-</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	40	+	+	+	+		+	+		+	+	+	+	+	-	-	+	+	+	+	+
			wä	25% <td>60</td> <td>0</td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	60	0	+	+			+	+		+	+	+		+			+	+	+	+	
			wä	25% <td>80</td> <td></td> <td></td> <td>+</td> <td>-</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td>-</td> <td>-</td> <td>+</td>	80			+	-		+	+		+	+	+		+			+	+	-	-	+
			wä	25% <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	100						+	+													
			wä	30% <td>20</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>-</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td>0</td> <td>0</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	20	+	+	+	+	-	+	+		+	+			+	0	0	+	+	+	+	+
			wä	30% <td>40</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td>-</td> <td>-</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td> <td>+</td>	40	+	+	+	+		+	+		+	+			+	-	-	+	+	+	+	+
			wä	30% <td>60</td> <td>0</td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td>+</td> <td></td> <td></td> <td>+</td> <td></td> <td></td> <td>+</td> <td>+</td> <td>+</td> <td></td> <td>+</td>	60	0	+	+			+	+		+	+			+			+	+	+		+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
wä	30%	80			+	-		+	+			+							+	+	-	-	+			+
wä	30%	100						+	+																	
wä	40%	20	+	+	+	+	-	+	+		+	+			+	0	0	+	+	+	+	+	+	0	0	+
wä	40%	40	+	+	+	+		+	+		+	+			+	-	-	+	+	+	+	+	+			+
wä	40%	60	0	+	+			+	+			+			+			+	+	+	+	+	+			+
wä	40%	80				-		+	+										+	+	-	-	+			+
wä	40%	100						+	+																	
wä	50%	20	+	+	+	+	-	+	+		+	+			+	-	-	+	+	+	+	+	+	0	0	+
wä	50%	40	+	+	+	+		+	+		+	+			+			+	+	+	+	+	+			+
wä	50%	60	0	+	+			+	+			+			+			+	+	+	+	+	+			+
wä	50%	80				-		+	+										+	+	-	-	+			+
wä	50%	100						+	+																	

1548	nickel(II) chloride	wä	GL	20	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+			+
		wä	GL	60	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+
NiCl2		wä	GL	80				+	+	+					+	+	+	+	+	+	+	+	+			+
Cl2Ni		wä	GL	100				+	+	+								+	+	+						+

1549	nickel(II) nitrate	wä	GL	20	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	60	0	+	+	+	+	+			+			+	+	+	+	+	+	+	+			+
Ni(NO3)2		wä	GL	80				+	+	+								+	+		+	+	+			+
N2NiO6		wä	GL	100				+	+	+								+	+							+

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1550	nickel(II) sulfate	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80			+	+	+	+	+			+				+	+	+	+	+	+	+	+	+	+
		wä	GL	100					+	+	+									+	+		+	+	+	+	+
NiSO4																											
NiO4S								+	+	+									+	+		+		+	+	+	
1551	nickel(II) sulfide	wä	GL	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	60	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+			+
		wä	GL	80			+	+	+	+	+			+			+	+	+	+	+	+	+	+	+		+
		wä	GL	100					+	+	+									+	+	+	+		+		+
NiS								+	+	+									+	+	+	+		+		+	
1552	nickel(II) sulfite	wä	GL	20		+	+	+		+	+			+	+	+	+	+	+	+	+		+	+	+		+
		wä	GL	40		+	+	+		+	+			+	+	+	+	+	+	+	+		+	+	+		+
		wä	GL	60		+	+	+		+	+			+		+	+	+	+	+	+		+	+	+		+
		wä	GL	80						+	+						+	+	+	+	+		+	+	+		
		wä	GL	100						+	+							+	+	+	+						
NiSO3																											
NiO3S									+	+							+	+	+	+		+	+	+			
1553	nickel(II) L-tartrate	wä	GL	20		+	+	+		+	+			+		+	+	+	+	+	+		+	+	+		+
		wä	GL	40		+	+	+		+	+			+		+	+	+	+	+	+		+	+	+		+
		wä	GL	60		+	+	+		+	+			+		+	+	+	+	+	+		+	+	+		+
		wä	GL	80						+	+						+	+	+	+	+						
		wä	GL	100						+	+							+	+	+	+						
L(+)-tartaric acid nickel salt																											
Ni[CO2CH(OH)CH(OH)CO2]																											
C4H4NiO6									+	+							+	+	+	+							
1554	(S)-(-)-nicotine	wä	VL	20		+	+	+	+	+	+		+	+		+	+	+	+								+
		wä	VL	40					+	+	+																
		wä	VL	60					+	+	+																
		wä	VL	80						+	+																
		wä	VL	100						+	+																
(S)-(-)-1-methyl-2-(3-pyridyl)pyrrolidine																											
C10H14N2									+	+																	

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1555	nicotinic acid pyridine-3-carboxylic acid niacin C6H5NO2	wä	VL	20	+	+		+	+	+																	
wä		VL	40	+	+			+	+	+																	
wä		VL	60	+				+	+	+																	
wä		VL	80					+	+	+																	
wä		VL	100					+	+	+																	
1556	nitrobenzene C6H5NO2		TR	20	-	+	+	+	+	+		-	+		0	-	0	0	+	+		+	+	+	+	+	+
		TR	40		0	0	0	0	+	+			0		-	-	-	-	-	+		+	+	+	+	+	
		TR	60		0	0	0	-	+	+			0		-		-	-		+		+	+	+	+	+	
		TR	80						+	+										+		+	+	+	+	+	
		TR	100						+	+										+		+		+	+	+	
		TR	120						+	+										+		+		+	+	+	
1557	nitrobenzoic acid (o-, m- a. p-) O2NC6H4CO2H C7H5NO4	wä	VL	20	+	+	+	+		+	+		+									+	+	+			
wä		VL	40						+	+												+	+	+			
wä		VL	60						+	+												+	+	+			
wä		VL	80						+	+												+	+	+			
wä		VL	100						+	+												+		+			
1559	nitroglycol ethylene glycol dinitrate O2NOCH2CH2ONO2 C2H4N2O6	wä	VL	20	-	-	-	-	+	+			-		-	+	+	+								+	
wä		VL	40						+	+																	
wä		VL	60						+	+																	
wä		VL	80						+	+																	
wä		VL	100						+	+																	

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1560	nitrophenol (o-, m- a. p-)	wä	GL	20	-					+	+	+																
		wä	GL	40							+	+	+															
		wä	GL	60							+	+																
		wä	GL	80							+	+																
		wä	GL	100							+	+																
1562	nitrotoluene (o-, m- a. p-)		TR	20	-	+	+	+	+	+	+	+		+		0	-	0	0				+	+	+			
			TR	40		+	+	+	+	+	+	+			+		-		-	-				+	+	+		
			TR	60		0	0	0	+	+	+				0									+	+	+		
			TR	80					+	+	+													+	+	+		
			TR	100					0	+	+													+		+		
			TR	120							+	+												+		+		
1563	fruit pulp			20	+	+	+	+	+	+	+			+		+	+	+	+							+	+	+
				40		+	+	+	+	+	+				+													
				60		+	+	+	+	+	+				+													
				80					+	+	+																	
				100							+	+																
1564	fruit juice, not fermented			20	+	+	+	+	+	+	+			+		+	+	+	+									
				40		+	+	+	+	+	+				+													
				60		+	+	+	+	+	+				+													
				80							+	+																
				100							+	+																

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1565	fruit juice, fermented	20	+	+	+	+	+	+	+			+		+	+	+	+									
		40		+	+	+	+	+	+				+													
		60		+	+	+	+	+	+				+													
		80						+	+																	
		100						+	+																	

1566	n-octane	TR					+	+	+					+	-	+	+	+	+		+	+	+	+	+	+
		TR					+	+	+							+	+	+	+		+	+	+	+	+	
		TR					+	+	+									+	+		+	+	+	+	+	
		TR					+	+	+										+	+		+	+	+	+	
		TR					+	+	+									+	+		+	+	+	+	+	
		TR					+	+	+										+			+		+	+	

1567	octyl tolyl ether (o-, m-, a. p-)	TR						+	+			0			-	0	0									
		TR						+	+			-			-											
		TR						+	+			-			-											
		TR						+	+																	
		TR						+	+																	
		TR						+	+																	

1569	oil (vegetable + animal)		20	+	+	+	+	+	+			+		+	-	+	+									
			40	+	+	+	+	+	+			+		+	-	+	+									
			60	+	0	0	0	+	+	+			0		+	-	+	+								
			80					+	+	+																
			100					+	+	+																

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	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1570	oleum		10% SO3	20	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			10% SO3	40	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			10% SO3	60	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			10% SO3	80	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			10% SO3	100	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H2SO4 + SO3																											
H2O4S + O3S																											
P																											
1571	oleum vapours	gf	GK	20	+	-	-	-	+	+	+	-	-	-	-	0	+	+	+	-	-	-	-	-	-	-	-
		gf	GK	40	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		gf	GK	60	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		gf	GK	80	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		gf	GK	100	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SO3																											
O3S																											
P																											
1572	olive oil			20	+	+	+	+	+	-	-	-	+	-	+	-	+	+	+	+	-	+	+	+	+	+	+
				40	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+
				60	+	0	0	0	+	-	-	-	0	0	+	+	+	+	+	+	-	+	+	+	+	+	+
				80	-	-	0	0	+	-	-	-	0	0	-	-	-	+	+	+	+	-	+	+	+	+	+
				100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	+	+	+
1573	oleic acid		TR	20	+	+	+	+	+	+	+	+	+	+	0	-	+	+	-	+	+	-	+	+	+	-	+
			TR	40	+	+	+	+	+	+	+	-	+	+	-	-	0	0	+	+	-	+	+	+	-	+	
			TR	60	+	0	0	0	+	+	+	-	+	0	-	-	-	-	-	+	+	-	+	+	+	-	+
			TR	80	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	+	+	-	+	+	+	-	+
			TR	100	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	+	+	-	+	-	+	-	+
			TR	120	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	+	+	-	+	-	+	-	+
cis-9-octadecenoic acid																											
CH3(CH2)7CH=CH(CH2)7CO2H																											
C18H34O2																											

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1574 orthophosphoric acid H3PO4 H3O4P	phosphoric acid	10%	20	+	+	+	+	+	+	0	+	+		0	+	+	+	+	+	+	+	+	+	+	+	+
		10%	40	+	+	+	+	+	+	-	+	+			+	+	+	+	+	+	+	+	+	+	+	+
		10%	60	0	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	+	+	+
		10%	80			+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	+
		10%	100				+	+	+							+	+	+	+					+	+	+
		30%	20	+	+	+	+	+	+	0	+	+		0	+	+	+	+	+	+	+	+	+	+	+	+
		30%	40	+	+	+	+	+	+	-	+	+			+	+	+	+	+	+	+	+	+	0	+	+
		30%	60	0	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	-	0	+
		30%	80			+	+	+	+			+			+	+	+	+	+	+	+	+	+			
		30%	100				+	+	+							+	+	+	+							
		50%	20	+	+	+	+	+	+	-	+	+		-	+	+	+	+	+	+	+	+	+	+	+	+
		50%	40	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	0	+	+
		50%	60	0	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	-	0	+
		50%	80				+	+	+						0	+	+	+	+	+	+	+	+			
		50%	100				+	+	+							0	0	+	+							
		60%	20	+	+	+	+	+	+	-	+	+		-	+	+	+	+	+	+	+	+	+	+	+	+
		60%	40	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	0	+	+
		60%	60	0	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+	-	0	+
		60%	80				+	+	+						0	+	+	+	+	+	+	+	+			
		60%	100				+	+	+							0	0	+	+							
		85%	20	+	+	+	+	+	+	-	+	+		-	0	+	+	+	+		+	+	+			+
		85%	40	+	+	+	+	+	+		+	+			0	+	+	+	+		+	+	+			+
		85%	60	0	0	+	+	+	+		+	+			0	+	+	+	+		+	+	+	-	-	+
		85%	80				+	+	+						0	+	+	+	+		+	+	+			
		85%	100				+	+	+							0	0	+	+							
		85%	120					+	+																	
		95%	20	+	+	+	+	+	+	-		+		-	0	+	+	+	+		+	+	+			+
		95%	40	+	+	0	0	+	+			0			0	+	+	+	+		+	+	+			+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
wä	95%	60			-	-	+	+	+			-			0	+	+	+	+		+		+	-	-	+
wä	95%	80					+	+	+							+	+	+	+							
wä	95%	100					+	+	+							0	0	+	+							
wä	95%	120						+	+																	

wä	10%	20	+	+	+	+	+	+	+			+		0	+	+	+	+	+	+	+	+	+	+	+	+
wä	10%	40	+	+	+	+	+	+	+			+		-	+	+	+	+	+	+	+	+	0	+	+	+
wä	10%	60	+	+	+	+	0	+	+		0	+						+	+	+			0	0	-	
wä	10%	80			0	0	-	+	+			0						+	+				-	0		
wä	10%	100						+	+									+	+					-		

gf	2%in Luft	20	+	0	0	0	+	+	+		+	0		-	+	+	+									+
gf	2%in Luft	40	+	-	-	-	+	+	+			-			+	0	0									+
gf	2%in Luft	60					0	+	+						+											+
gf	2%in Luft	80						+	+																	
gf	2%in Luft	100						+	+																	
wä	GL	20	+	0	0	0	+	+	+			0		-	+	+	+									
wä	GL	40	+	-	-	-	+	+	+			-			0	0	0									
wä	GL	60					+	+	+						-	-	-									
wä	GL	80					0	+	+																	
wä	GL	100						+	+																	

	TR	20	+	0	0	0	+	+	+		+	0		0	0	+	+				+	+	+				
	TR	40			0	0	+	+	+			0		-	-	0	0				+	+	+				
	TR	60			-	-	+	+	+			-				-	-				+	+	+				
	TR	80					+	+	+												+	+	+				
	TR	100					+	+	+												+		+				
	TR	120					+														+		+				

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1579	palm kernel oil	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+	+	+			+	+	+	+
		40	-	+	+	+	+	+	+		+	+		+	0	+	+	+	+	+			+	+	+	+
		60		0	0	0	+	+	+			0		0	-	+	+	+	+	+			+	+	+	+
		80					+	+	+																	
		100					+	+	+																	
1582	p-toluenesulfonic acid 4-methylbenzenesulfonic acid CH3C6H4SO3H C7H8O3S	wä 10%	20	+	+	+	+	+	+			+		0	+	+	+	+	+	+	+	+	+			+
		wä 10%	40	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+			+
		wä 10%	60				+	+	+						+	+	+	+	+	+	+	+	+			+
		wä 10%	80					+	+									+	+		+	+	+			+
		wä 10%	100					+	+									+	+							+
		wä 50%	20	+	+	+	+	+	+			+		-		+	+	+	+	+	+	+	+			+
		wä 50%	40		+	+	+	+	+			+				+	+	+	+	+	+	+	+			+
		wä 50%	60				+	+	+									+	+		+	+	+			+
		wä 50%	80					+	+									+	+		+	+	+			+
		wä 50%	100					+	+									+	+							+
1583	pentanol (mixture of isomers) amyl alcohol (mixture of isomers)	TR	20	+	+	+	+	+	+	-	+	+		+	+	0	0	+	+		+	+	+	+	+	+
		TR	40	+	+	+	+	+	+		0	+		+	+			+	+		+	+	+	+	+	+
		TR	60	0	+	+	+	+	+		0	+		+	+			+	+		+	+	+	+	+	+
		TR	80				+	+	+									+	+		+	+	+	+	+	+
		TR	100				+	+	+									+	+		+		+	+	+	+
		TR	120				0	+	+									+			+		+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																			
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor
1584	perchloroethane	TR	20	-	0	0	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		hexachloroethane	TR	40				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	60					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		CI3CCCI3	TR	80					+	+	+	+	+	+	+	+	+	+	+	+	+	+
		C2Cl6	TR	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+
1585	perchloric acid	wä	10%	20	+	+	+	+	+	+	+	-	-	+	-	-	0	+	+	+	+	0
		wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	80				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	10%	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	70%	20	0	0	0	0	+	+	+	-	-	0	-	-	0	+	+	+	+	0
		wä	70%	40	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	70%	60		-		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	70%	80				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	70%	100				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	70%	120				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1586	kerosene	TR	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	40		+	0	0	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+
		TR	60		0	0	0	+	+	+	+	0	+	+	+	0	0	+	+	+	+	+
		TR	80					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	100					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		TR	120					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1588	phenol	wä	10%	20	+	+	+	+	+	+	+		-	+		-	+	+	+	+	+		+	+	+	+	+	+
		hydroxybenzene	wä	10%	40	0	+	+	+	+	+	+			+			+	+	+	+	+		+	+	+	+	+
			wä	10%	60	0	0	+	+	+	+	+			+			+	+	+	+	+		+	+	+	+	+
		C6H5OH	wä	10%	80					+	+	+						0	0	0	+	+		+	+	+	+	+
		C6H6O	wä	10%	100					+	+	+									+	+				+	+	+
			wä	90%	20	-	+	+	+	+	+	+			+		-	-	+	+	+	+		+	+	+	+	+
			wä	90%	40	-	+	+	+	+	+	+			+				0	0	+	+		+	+	+	+	+
			wä	90%	60	-	0	0	0	+	+	+			0				-	-	+	+		+	+	+	+	+
			wä	90%	80					+	+	+									+	+		+	+	+	+	+
			wä	90%	100					+	+	+									+	+					+	+
1590	phenylhydrazine		TR	20	-	0	0	0	+	+	+			0		-	0	+	+									
			TR	40					+	+	+								+	+								
		C6H5NHNH2		TR	60						+	+							0	0								
		C6H8N2		TR	80						+	+																
			TR	100						+	+																	
1591	phosgene	gf	TR, GK	20	+	0	0	0	0	+	+			0		-	+	+	+									
		carbonyl dichloride	gf	TR, GK	40	0	0	0	0	0	+	+			0			+	+	+								
		carbonic acid dichloride	gf	TR, GK	60	0	0				+	+						+	0	0								
		COCl2	gf	TR, GK	80						+	+																
		CCl2O	gf	TR, GK	100						+	+																
1594	phosphine	gf	TR, GK	20	+				+	+	+		0			-	+	+	+									+
		phosphane	gf	TR, GK	40	+				+	+	+																
			gf	TR, GK	60						+	+																
		PH3	gf	TR, GK	80						+	+																
		H3P	gf	TR, GK	100						+	+																

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1600 phthalic acid monobutyl ester monobutyl phthalate 2-(HO2C)C6H4CO2CH2(CH2)2CH3 C12H14O4	TR	20	-	+	+	+		+	+	+	-	+						+	+		+	+	+	+	+	+
	TR	40		+				+	+									+	+		+	+	+	+	+	+
	TR	60						+	+									+	+		+	+	+	+	+	+
	TR	80						+	+										+		+	+	+	+	+	+
	TR	100						+	+										+		+		+	+	+	+

1601 picric acid 2,4,6-trinitrophenol C6H2(NO2)3OH C6H3N3O7	wä	VL	20	+	+	+	+	+	+	+		+		+	+	+	+							+	+	+
	wä	VL	40		+			+	+	+				-	+	+	+									
	wä	VL	60					+	+	+					0	+	+									
	wä	VL	80					+	+	+																
	wä	VL	100					+	+	+																
	wä	GL	20	+	+	+	+	+	+	+		+		0	0	+	+							+	+	+
	wä	GL	40		+			+	+	+						-	+	+								
	wä	GL	60					+	+	+						0	0									
	wä	GL	80						+	+																
	wä	GL	100					+	+																	

1603 polyaluminium chloride PAC Aln(OH)xCl3n-x HxAlnCl3n-xOx	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	0	+
	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		-	+
	wä	10%	60	+	+	+	+	+	+	+	0	0	+			+	+	+	+	+	+	+	+			+
	wä	10%	80			+	+	+	+	+		+				+	+	+	+	+	+	+	+			+
	wä	10%	100				+	+	+							+	+	+	+	+	+	+	+			+
	wä	GL	20	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	-	-	+
	wä	GL	40	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+			+
	wä	GL	60	+	+	+	+	+	+	+		+				+	+	+	+	+	+	+	+			+
	wä	GL	80			+	+	+	+	+		+				+	+	+	+	+	+	+	+			+
	wä	GL	100					+	+	+							+	+	+	+	+	+	+			+

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Chemical Resistance

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Chemical Resistance

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Condition	Concentration	Temperature [°C]	Material																								
			Hast-C 2.4537	V4A 1.4571	V2A 1.4301	ZrO2	Al2O3 Sensor	Al2O3	Carbon	SSiC	FFKM	FKM+	FKM = FPM	EPDM	NBR	HG1	PEEK	PSU	PA12	FEP, PFA	PTFE	PVDF	PP-GF30	PP	PE	PVC-U	
1604	polyethylene glycol	TR	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		TR	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		TR	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		TR	80											+							+	+					
		TR	100																		+	+					
		TR	120																		+	+					
1605	propane	gf	TR, GK	20	+	+	+	+	+	+	+		+	+			+	+									
		gf	TR, GK	40		+			+	+	+		+														
		gf	TR, GK	60					+	+	+		+														
		gf	TR, GK	80					+	+	+																
		gf	TR, GK	100							+	+															
1606	1-propanol		TR	20	+	+	+	+	+	+	+	-		+		0	+	+	+	+	+	+		+	+	+	+
			TR	40	0	+	+	+	+	+	+			+		0	+	+	+	+	+	+		+	+	+	+
			TR	60	0	+	+	+	+	+	+			+		-	+	+	+	+	+	+		+	+	+	+
			TR	80					0	+	+					0	0	0		+		+	+	+	+	+	+
			TR	100						+	+							-	-		+		+		+	+	+
1607	propargyl alcohol	wä	10%	20	+	+	+	+	+	+	+			+		+	+	+	+		+		+	+	+	+	+
		wä	10%	40	+	+	+	+	0	+	+			+		+	+	+	+		+		+	+	+	+	+
		wä	10%	60	+	+	+	+	0	+	+			+		+	+	+	+		+		+	+	+	+	+
		wä	10%	80						+	+										+					+	+
		wä	10%	100						+	+										+					+	+

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1608 propionic acid propanoic acid methylacetic acid CH ₃ CH ₂ CO ₂ H C ₃ H ₆ O ₂	50%	20	+	+	+	+	+	+	+		+	+		-		-	+	+	+	+
		40	+	+	+	+	+	+	+		+	+			-		0	+	+	+
		60	0	+	+		+	+	+			+					0		+	+
		80						+	+										+	+
		100						+	+									+		+
		TR	0	+	+	+	+	+	+		+	+		-	+	-	0	+	+	+
		40	-	0	0	0	+	+	+		-	0			0		0	+	+	+
		60		0	0	0	+	+	+			0			0			+	+	+
		80						+	+									+	+	+
		100						+	+									+		+
1609 1,2-propylene glycol CH ₃ CH(OH)CH ₂ OH C ₃ H ₈ O ₂	50%	20		+	+	+		+	+	-	+	+		+	+	+	+	+	+	+
		40		+	+	+		+	+		+	+		0	+	+	+	+	+	+
		60		+	+	+		+	+		+	+		-	+	+	+	+	+	+
		80						+	+						+	+	+	+	+	+
		100						+	+								+	+	+	+
		TR		+	+	+		+	+	-	+	+		+	+	+	+	+	+	+
		40		+	+	+		+	+		+	+		0	+	+	+	+	+	+
		60		+	+	+		+	+		+	+		-	+	+	+	+	+	+
		80						+	+						+	+	+	+	+	+
		100						+	+								+	+	+	+
1610 1,2-epoxypropane propene oxide C ₃ H ₆ O	TR	20	0	+	+	+	-	+	+			+		-	+	-	-			

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

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1611		pyridine		TR	20	-	+	0	0	+	+	+	+	0	0			+	-	+	+	+		+	+			+	
			Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
				TR	40		0	0	0	0	+	+			0			0	-	-	+	+		+ <td>+<td></td><td></td><th>+</th></td>	+ <td></td> <td></td> <th>+</th>			+	
				TR	60		0	0	0	-	+	+			0			-				+		+				+	
C5H5N				TR	80						+	+										+						+	
				TR	100						+	+										+						+	

1612		mercury		TR	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+			+	+	+	+	+
			Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA		+	+		+	+	+	+	+			+	+	+	+	+
				TR	40	+	+	+	+	+	+	+		+	+		+	+	+	+	+			+	+	+	+	+
				TR	60	+	+	+	+	+	+	+		+	+		+	+	+	+	+			+	+	+	+	+
Hg				TR	80					+	+	+							+	+	+			+	+			
				TR	100					+	+	+								+	+			+	+			
				TR	120					+	+	+								+	+			+	+			

1613		murcury(II) sulfate	wä	GL	20	+	+	+	+	+	+	+		+	+	+			+	+	+	+		+	+	+		+
			Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA		+	+	+			+	+	+	+		+	+	+		+
			wä	GL	40	+	+	+	+	+	+	+		+	+	+			+	+	+	+		+	+	+		+
			wä	GL	60		+	+	+	+	+	+		+	+					+	+			+	+	+		+
HgSO4			wä	GL	80					+	+	+								+	+			+	+	+		+
HgO4S			wä	GL	100					+	+	+								+	+			+	+			

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Chemical Resistance

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Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1614	mercury(II) chloride	wä	VL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	VL	80				+	+	+								+	+	+
		wä	VL	100					+	+								+	+	+
		wä	GL	20	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+		+			+	+	+	+	+	+
		wä	GL	80				+	+	+								+	+	+
		wä	GL	100					+	+								+	+	+
1615	mercury(II) cyanide	wä	VL	20	+	+	+	+	0	+	+		+			+	+	+	+	+
		wä	VL	40	+	+	+	+		+	+		+			+	0	0	+	+
		wä	VL	60	0	+	+		+	+		+						+	+	+
		wä	VL	80					+	+								+		+
		wä	VL	100					+	+								+		+
		wä	GL	20	+	+	+	+	-	+	+		+			+	0	0	+	+
		wä	GL	40	+	+	+	+		+	+		+			+	-	-	+	+
		wä	GL	60	0	+	+		+	+		+						+	+	+
		wä	GL	80					+	+								+		+
		wä	GL	100					+	+								+		+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1616	mercury(II) nitrate	wä	25%	20	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+			+
		wä	25%	40	+	+	+	+	+	+	+				+			+	+	+	+	+	+	+			+	
		wä	25%	60	0	+	+	+	+	+	+				+						+	+	+	+			+	
		wä	25%	80					+	+	+											+		+	+			+
		wä	25%	100						+	+	+										+		+	+			+
		wä	GL	20	+	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+	+			+						+	+	+	+	+			+
		wä	GL	80						+	+	+										+		+	+			+
		wä	GL	100						+	+	+										+		+	+			+
1620	salicylic acid	wä	GL	20	+	+	+	+	+	+	+			+		+		+	+	+	+	+	+	+	+			+
		wä	GL	40	+	+	+	+	+	+	+			+		+		+	+	+	+	+	+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+				+		0		+	+	+	+	+	+	+			+
		wä	GL	80						+	+	+					-		+	+	+	+		+	+			+
		wä	GL	100						0	+	+										+		+	+			+

Hg(NO3)2

HgN2O6

2-hydroxybenzoic acid

HOC6H4CO2H

C7H6O3

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

[illegible]

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

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1623	hydrochloric acid																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
O2	oxygen	gf	TR, GK	20	+	+	+	+	+	+	+		+	+		-	+	+	+									
		gf	TR, GK	40	+	+	0	0	+	+	+		+	0			+	+	+									
		gf	TR, GK	60	+	0	0	0	+	+	+		+	0				+	+	+								
		gf	TR, GK	80					0	+	+							+	+	+								
		gf	TR, GK	100					0	+	+								+	+								
		gf	TR, GK	120						+	+								+	+								
soft soap	soap			20	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
				40	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
				60	0	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+			+
				80					+	+	+										+	+		+	+			+
				100					+	+	+									+	+		+					+
S8	sulfur		TR	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+						+	+	+
			TR	40	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+						+	+	+
			TR	60		+	+	+	+	+	+			+				+	+	+	+					+	+	+
			TR	80			+	+	+	+	+			+					+	+	+					+	+	+
			TR	100					+	+	+								+	+	+					+	+	+
SO2 O2S	sulfur dioxide, gaseous	gf, fe	TR, GK	20	+	+	+	+	+	+	+		+	+		-	+	+	+	+							+	+
		gf, fe	TR, GK	40	+	+	+	+	+	+	+			+			+			+								
		gf, fe	TR, GK	60	0	+	+	+	+	+	+			+			0			+								
		gf, tr	TR, GK	20	+	+	+	+	+	+	+		+	+		-	+	+	+	+							+	+
		gf, tr	TR, GK	40	+	+	+	+	+	+	+			+			+	0	0	+							+	+
		gf, tr	TR, GK	60	0	+	+	+	+	+	+	+			+			0		+							+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Condition	Concentration	Temperature [°C]																				
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor
1632	sulfuric acid	20	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		80			+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		100					+	+	+						-	+	+	+	+			
		20	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		80			+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		100					+	+	+						-	+	+	+	+			
		20	+	+	+	+	+	+	+		+	+	+	0	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+	-	+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		80			+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		100					+	+	+						-			+	+			
		20	+	+	+	+	+	+	+	-	+	+	+	0	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+	-	+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		80			+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		100					+	+	+						-			+				
		20	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+			+	+	0	+	+	+	+	+	+	+	+
		80			+	+	+	+	+			+	+		-	+	+	+	+	+	+	+
		100					+	+	+									+				
		20	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+							+	+	+	+	+	+	+
		80			+	+	+	+	+			+	+		-	+	+	+	+	+	+	+
		100					+	+	+									+				
		20	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+
		60	0	+	+	+	+	+	+			+	+			+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution
GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																							
			Hast-C 2,4537	V4A 1,4571	V2A 1,4301	ZrO2	Al2O3 Sensor	Al2O3	Carbon	SSiC	FFKM	FKM+	FKM = FPM	EPDM	NBR	HG1	PEEK	PSU	PA12	FEP, PFA	PTFE	PVDF	PP-GF30	PP	PE	PVC-U
wä	60%	80																								
wä	60%	100																								
wä	70%	20	+	-	-	+	+	+	+	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+
wä	70%	40	+			+	+	+	+		+	+	+			+	+	+	+	+	+	+	+	+	+	+
wä	70%	60				+			+			+							+	+	+					
wä	70%	80						+	+										+	+	+					
wä	70%	100							+										+	+						
wä	75%	20	+	-	-	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
wä	75%	40	+			+	+	+	+		+	+				+	+	+	+	+	+	+	+	+	+	+
wä	75%	60						+	+										+	+	+					
wä	75%	80						+	+										+	+	+					
wä	75%	100							+										+	+						
wä	80%	20	+	-	-	+	+	+	+	-	+	+		-	+	+	+	+	+	+	+	+	+	+	+	+
wä	80%	40	+			+	+	+	+		+	+			0	+	+	+	+	+	+	+	+	+	+	+
wä	80%	60	-	0	0		+	+	+			0				+	+	+	+	+	+					+
wä	80%	80					+	+	+										+	+	+					
wä	80%	100					0	+	+										+	+	0					
wä	85%	20	+				+	+	+	-				-	0	+	+	+	+	+	+	+	+	+	+	+
wä	85%	40	+				+	+	+						-	+	+	+	+	+	+	+	+	+	+	+
wä	85%	60	-				+	+	+								+	+	+	+	+	+	+	+	+	+
wä	85%	80					+	+	+										+	+	+					
wä	85%	100						+	+										+	+						
wä	90%	20					+	+	+	-				-	-	+	+	+	+	+	+	+	+	+	+	+
wä	90%	40					+	+	+							+	+	+	+	+	+	+	+	+	+	+
wä	90%	60	-				+	+	+						0	+	+	+	+	+	+	+	+	+	+	+
wä	90%	80						+	+										+	+						
wä	90%	100						+	+										+	+						
wä	96%	20	0	-	-	-	+	+	+	-	-	-	-	-	0	+	+	+	-	+	+	+	+	+	-	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Hast-C 2,4537	+	+				+	+																			
V4A 1,4571																										
V2A 1,4301																										
ZrO2	+	+	+																							
Al2O3 Sensor	+																									
Al2O3	+	+	+																							
Carbon																										
SSiC	+	+	+																							
FFKM	+	+	+																							
FKM+	+																									
FKM = FPM	-																									
EPDM																										
NBR																										
HG1																										
PEEK																										
PSU																										
PA12																										
FEP, PFA	+	+	+																							
PTFE	+	+	+																							
PVDF	+	0	-																							
PP-GF30																										
PP																										
PE																										
PVC-U	-																									
Concentration	96%	40																								
	96%	60																								
	96%	80																								
	96%	100																								
	98%	20	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	+	-	+	+	+		+	
Condition	wä	96%																								
	wä	96%																								
	wä	96%																								
	wä	96%																								
	wä	98%																								
	wä	98%																								
	wä	98%																								
	wä	98%																								
	wä	98%																								
	wä	98%																								

1634	sulfur trioxide				gf	TR, GK	20	-	-	-	-	0	+	+			-		-	-	-		+																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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1635	hydrogen sulfide	wä	VL	20	+	+	+	+	+	+		+		-	+			+	+	+	+	+	+		
H2S		wä	VL	40	+	+	+	+	+	+		+			0			+	+	+	+	+	+		
		wä	VL	60	0	+	+	+	+	+		+			-			+	+		+	+	+		
		wä	VL	80					+	+	+							+	+		+	+	+		
		wä	VL	100					+	+	+							+	+		+		+		
		wä	GL	20	+	+	+	+	+	+		+		-	+			+	+	+	+	+	+		
		gf	TR, GK	20	+	+	+	+	+	+	0	+		-	+			+							
		gf	TR, GK	40	+	+	+	+	+	+		+			0			+							
		gf	TR, GK	60	+	0	+	+	+	+		+			-			+							
		gf	TR, GK	80					+	+	+							+							
		gf	TR, GK	100					+	+	+							+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution
GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1636	sulfur dioxide, aqueous solution sulfurous acid SO ₂ • xH ₂ O ("H ₂ SO ₃ ") O ₂ S • xH ₂ O ("H ₂ O ₃ S")	10% (GL)	20	+	+	+	+	+	+	-	+	+		-	+	+	+	+	+	+
		< 10%	40	+	+	+	+	+	+		+	+			+	0	+	+	+	+
		< 10%	60	0	+	+	+	+	+			+			0	-	+	+	+	+
		< 10%	80			+	+	+	+			+			-			+	+	+
		< 10%	100				+	+	+									+		+
1637	soap hydrous solution		20	+	+	+	+	+	+		+	+		+	+	+	+			+
			40	+	+	+	+	+	+		+	+		+	+	+	+			+
			60	0	+	+	+	+	+		+	+		+	+	+	+			+
			80				+	+	+											
			100				+	+	+											
1638	silver acetate CH ₃ CO ₂ Ag C ₂ H ₃ AgO ₂	GL	20	+	+	+	+	+	+			+		+	+	+	+		+	+
		GL	40	+	+	+	+	+	+			+		+	+	+	+		+	+
		GL	60	0	+	+	+	+	+			+		+	+	+	+		+	+
		GL	80				+	+	+										+	+
		GL	100				+	+	+											
1639	silver chloride AgCl	GL	20	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+
		GL	40	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+
		GL	60	+	+	+	+	+	+		+	+			+	+	+	+	+	+
		GL	80			+	+	+	+			+			+	+	+	+	+	+
		GL	100				+	+	+						+	+	+	+	+	+
1640	silver cyanide AgCN CAgN	GL	20	+	+	+	+	+	+			+		+	+	+	+		+	+
		GL	40	+	+	+	+	+	+			+		+	+	+	+		+	+
		GL	60	0	+	+	+	+	+			+		+	+	+	+		+	+
		GL	80				+	+	+											
		GL	100					+	+											

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
AgNO3	1641	silver nitrate	GL	20	+	+	+	+	+	+	+			+		+	+	+	+				+	+	+	+	+	+	
			GL	40	+	+	+	+	+	+	+	+			+		+	+	+	+				+	+	+	+	+	+
			GL	60	-	+	+	+	+	+	+	+				+		+	+	+				+	+	+	+	+	+
			GL	80						+	+	+												+	+	+	+	+	+
			GL	100						+	+	+															+	+	+
Ag2SO4 Ag2O4S	1642	silver sulfate	GL	20						+	+				+			+	+	+	+	+	+	+	+				
			GL	40							+	+				+			+	+	+	+	+	+	+				
			GL	60							+	+							+	+	+	+	+	+	+				
			GL	80							+	+							+	+	+	+	+	+	+				
			GL	100							+	+									+	+							
polydimethylsiloxane HO[Si(CH3)2O]nH C2H6OSi	1643	silicone oil	TR	20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	
			TR	40		+	+	+	+	+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+
			TR	60		+	+	+	+	+	+	+				+		+	+	+	+	+	+	+	+	+	+	+	+
			TR	80			+	+	+	+	+	+				+					+	+	+	+	+	+	+	+	+
			TR	100			+	+	+	+	+	+				+					+	+	+	+		+	+	+	+
			TR	120					+	+	+	+									+	+	+	+		+			
	1644	sperm oil		20	+	+	+	+	+	+	+			+		+	0	+	+									+	
				40						+	+																		
				60						+	+																		
				80						+	+																		
				100						+	+																		

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

UBBE

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																								
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1646	spin bath acid with carbondisulfide	100mgCS2/L	20	+	+	+	+	+	+	+	+	0	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+
		100mgCS2/L	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100mgCS2/L	60	+	-	0	0	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100mgCS2/L	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100mgCS2/L	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		200mgCS2/L	20	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		200mgCS2/L	40	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		200mgCS2/L	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		200mgCS2/L	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		200mgCS2/L	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		700mgCS2/L	20	-	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+
		700mgCS2/L	40	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+
		700mgCS2/L	60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		700mgCS2/L	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		700mgCS2/L	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

1649	starch	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		wä	GL	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

(C6H10O5)n

C6H10O5

1650	starch sirup	H	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		H	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		H	60	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		H	80	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		H	100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

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	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1652 stearic acid octadecanoic acid CH3(CH2)16CO2H C18H36O2		TR	20	+	+	+	+	+	+	+		-	+		+	+	+	+		+		+	+	+	+	+	+
		TR	40	+	+	+	+	+	+	+			+		+	+	+	+		+		+	+	+	+	+	+
		TR	60	+	0	0	0	+	+	+			0		0	0	0	0		+		+	+	+	+	+	+
		TR	80					+	+	+										+		+	+	+	+	+	+
		TR	100					+	+	+										+							
		TR	120					+												+							
1653 stearic acid butyl ester butylstearate octadecanoic acid butyl ester CH3(CH2)16CO2CH2(CH2)2CH3 C22H44O2		TR	20		+	+	+	+	+	+			+		+	+	+	+				+	+	+	+	+	+
		TR	40		+	+	+	+	+	+			+		+	+	+	+				+	+	+	+	+	+
		TR	60		0	0	0	+	+	+			0		0	0	0	0				+	+	+	+	+	+
		TR	80					+	+	+												+	+	+	+	+	+
		TR	100					+	+	+												+		+	+	+	+
		TR	120						+	+												+		+	+	+	+
1655 strontium chloride SrCl2 Cl2Sr	wä	GL	20	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+			
	wä	GL	40	+	+	+	+	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+			
	wä	GL	60	0	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+			
	wä	GL	80			+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+			
	wä	GL	100					+	+	+									+	+							
1656 styrene vinylbenzene phenylethylene C6H5CH=CH2 C8H8		TR	20	-	0	0	0	-	+	+		-	0						+			+	+	+			
		TR	40	-	-	0	0	-	+	+			0						+			+	+	+			
		TR	60			-	-		+	+			-									+	+	+			
		TR	80						+	+												+	+	+			
		TR	100						+	+																	

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	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537	
1657	sulfamic acid	wä	16% (GL)	20	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+	+				
		aminosulfuric acid	wä	16% (GL)	40	+	+	+	+	+	+		+	+			+	+	+	+	+	+	+	+				
		amidosulfuric acid	wä	16% (GL)	60		+	+	+	+	+		+	+			+	+	+	+	+	+	+	+				
		H2NSO3H	wä	16% (GL)	80			+	+	+	+		+	+			+	+	+	+	+	+	+	+				
		H3NO3S	wä	16% (GL)	100						+	+								+	+							
1658	SurTec 104 universal cleaner	wä	8%	20	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	+	
		wä	8%	40	+	+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+		
		wä	8%	60	+	+	+	+	+	+	+			+			0	+	+	+	+	+	+	+	+	+		
		wä	8%	80						+	+									+	+		+	+	+	+		
		wä	8%	100						+	+									+	+		+		+	+	+	
1659	nitrogen	gf	TR, GK	20	+	+	+	+	+	+	+	+	+			+	+	+	+	+						+	+	+
		gf	TR, GK	40	+	+	+	+	+	+	+	+	+	+			+	+	+	+	+					+	+	+
		gf	TR, GK	60	+	+	+	+	+	+	+	+	+	+			+	+	+	+	+					+	+	+
		gf	TR, GK	80		+	+	+	+	+	+	+	+	+			+	+	+	+	+					+	+	+
		gf	TR, GK	100			+	+	+	+	+	+		+	+		+	+	+	+	+					+	+	+
		gf	TR, GK	120					+	+	+						+	+	+	+	+					+	+	+
1660	Tanigan® extra A			20	+					+	+		-			+	+	+	+									
				40						+	+					+	+	+	+									
				60						+	+																	
				80						+	+																	
				100						+	+																	

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Hast-C 2,4537 V4A 1,4571 V2A 1,4301 ZrO2 Al2O3 Sensor Al2O3 Carbon SSiC FFKM FKM+ FKM = FPM EPDM NBR HG1 PEEK PSU PA12 FEP, PFA PTFE PVDF PP-GF30 PP PE PVC-U															
1661	Tanigan® extra B	20	+															
		40																
		60																
		80																
		100																
1662	Tanigan® extra D	20	+															
		40	0															
		60	-															
		80																
		100																
1663	Tanigan® F	20	+															
		40	+															
		60	+															
		80																
		100																
1664	Tanigan® U	20																
		40																
		60																
		80																
		100																
1665	tannin	20	+	+	+	+	+	+	+			+		+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+
		60	+	+	+	+	+	+	+			+		+	+	+	+	+
		80					+	+	+							+	+	
		100					+	+	+									
	tannic acid	20	+	+	+	+	+	+	+			+		+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+
		60	+	+	+	+	+	+	+			+		+	+	+	+	+
		80					+	+	+							+	+	
		100					+	+	+									
	gallotannic acid	20	+	+	+	+	+	+	+			+		+	+	+	+	+
		40	+	+	+	+	+	+	+			+		+	+	+	+	+
		60	+	+	+	+	+	+	+			+		+	+	+	+	+
		80					+	+	+							+	+	
		100					+	+	+									

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Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1666	turpentine	20	+	0	-	-	+	+	+		0	-		+	-	+	+	+	+	+
		40	0	0			+	+	+					0		+	+	+	+	+
		60		0				+	+					-		+	+	+	+	+
		80						+	+									+	+	+
		100						+	+									+	+	+
1667	turpentine substitute	20	+	0	0	0	+	+	+			0		+	-	+	+	+	+	+
		40	0	-	-	-	+	+	+			-		+		+	+	+	+	+
		60						+	+							+	+	+	+	+
		80						+	+									+	+	+
		100						+	+									+	+	+
1668	oil of turpentine	20	+	0	-	-	+	+	+		0	-		+	-	+	+	+	+	+
		40	0	0				+	+					0		+	+	+	+	+
		60						+	+					-				+	+	+
		80						+	+									+	+	+
		100						+	+									+	+	+
1669	tetrabromomethane carbon tetrabromide CBr4	TR	20	-	-	-	-	+	+	+		-		-	-	-	-	+	+	+
		TR	40					+	+	+								+	+	+
		TR	60					+	+									+	+	+
		TR	80					+	+									+	+	+
		TR	100					+	+									+	+	+
1670	1,1,2,2-tetrachloroethane acetylene tetrachloride TCE CHCl2CHCl2 C2H2Cl4	TR	20	-	0	0	0	0	+	+		-	0		-	-	-	+	+	+
		TR	40					0	+	+		-						+	+	+
		TR	60					0	+	+		-						+	+	+
		TR	80						+	+								+	+	+
		TR	100						+	+								+	+	+

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Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
1671	tetrachloroethylene	TR	20	-	0	0	0	+	+	+		0		0	-	0	0	+	+	+
		TR	40		0			+	+	+				-		0	0	+	+	+
		TR	60		-	0	0	+	+	+		0				0	0	+	+	+
		TR	80					0	+	+								+	+	+
		TR	100					0	+	+								+	+	+
1672	tetrachloromethane	TR	20	0	-	-	-	+	+	+	+	0	-		-	-	+	+	+	+
		TR	40	-				+	+	+	+					+	+	+	+	+
		TR	60					0	+	+						+	+	+	+	+
		TR	80						+	+								+	+	+
		TR	100						+	+								+	+	+
1673	tetraethyllead	TR	20	+	+	+	+	+	+	+		+		0	0	+	+			+
		TR	40					+	+	+										
		TR	60					+	+	+										
		TR	80					+	+	+										
		TR	100					+	+	+										
1674	tetrahydrofuran	TR	20	-	0	0	0	0	+	+	-	-	0		-	-	-	+	+	+
		TR	40		-	-	-	-	+	+		-						+	+	+
		TR	60						+	+								+	+	+

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		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1675	1,2,3,4-tetrahydronaphthalene		TR	20	-	0	-	-	+	+	+		-	-		-	-	+	+		+	+	+	+	+			
Tetralin® C10H12			TR	40						+	+										+	+	+	+	+			
			TR	60						+	+										+		+	+	+			
			TR	80						+	+										+		+	+	+			
			TR	100						+	+										+		+	+	+			
1676	thioglycolic acid		TR	20	-	+	+	+		+	+			+		-												
mercaptoacetic acid HSCH2CO2H C2H4O2S			TR	40		+	+	+		+	+			+														
			TR	60		+	+	+		+	+			+														
			TR	80						+	+																	
			TR	100						+	+																	
1677	thionyl chloride		TR	20	-	-	-	-	+	+	+	-	-	-		-	-	-	-	+	-	+		+				
sulfurous acid dichloride SOCl2 Cl2OS P			TR	40					0	+	+									+		+		+				
			TR	60					-	+	+									+		+		+				
			TR	80																								
1678	thiophene		TR	20	-	0	0	0	+	+	+		0	0		-	-	-	-	+		+	+	+	+	+	+	+
C4H4S P			TR	40		0	-	-		+	+			-						+		+	+	+	+	+	+	+
			TR	60		-				+	+									+		+	+	+	+	+	+	+
			TR	80						+	+									+		+	+	+	+	+	+	+
1679	toluene		TR	20	-	0	0	0	+	+	+		-	0		-	-	+	+	+	+	+	+	+	+	+	+	+
methylbenzene C6H5CH3 C7H8 P			TR	40		0	-	-	+	+	+			-				0	0	+	+	+	+	+	+	+	+	+
			TR	60		-			0	+	+									+	+		+	+	+	+	+	+
			TR	80					0	+	+									+	+		+	+	+	+	+	+
			TR	100					-	+	+									+	+		+	+	+	+	+	+

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Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537
1681	tributyl phosphate	TR	20	-	+	+	+	+	+	+	-	+		-	+	-	-				+	+	+			
phosphoric acid tributyl ester TBP (C4H9O)3PO C12H27O4P		TR	40		+	+	+	+	+			+									+	+	+			
		TR	60		+	+	+	+	+			+									+	+	+			
		TR	80					+	+												+	+	+			
		TR	100					+	+												+		+			
1682	trichloroacetaldehyde	TR	20	-	+	+	+	-	+	+		+		0	-	0	0									
chloral CCl3CHO C2HCl3O		TR	40		+	+	+	+	+			+														
		TR	60		+	+	+	+	+			+														
		TR	80					+	+																	
		TR	100					+	+																	
1683	trichlorobenzene (mixture of isomers)	TR	20	-	-	-	-	-	+	+	-	-		-	-			+	+		+	+	+	+	+	+
C6H3Cl3		TR	40					+	+									+	+		+	+	+	+	+	+
		TR	60					+	+									+			+	+	+	+	+	+
		TR	80					+	+									+			+	+	+	+	+	+
		TR	100					+	+									+			+		+	+	+	+
1684	trichloroacetic acid	wä	50%	20	+	+	+	+	+	+	0	+		-	0	-	-	+								+
CCl3CO2H C2HCl3O2		wä	50%	40	0	+	+	+	+	+		+						+								+
		wä	50%	60		+	+	0	+	+		+						+								+
		wä	50%	80				-	+	+								+								+
		wä	50%	100					+	+																
1685	trichloroethylene	TR	20	-	-	0	0	+	+	+	-	-	0		-	-	0	0	+			+	+	+	+	+
trichloroethene ClCH=CCl2 C2HCl3		TR	40					+	+	+								+			+	+	+	+	+	+
		TR	60					+	+	+								+			+	+	+	+	+	+
		TR	80					+	+	+								+			+	+	+	+	+	+

P

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

[illegible]

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1692	urine	20	+	+	+	+	+	+	+		+	+			+	+	+									
		40	+	+	+	+	+	+	+			+			+	+	+									
		60	0	+	+	+	+	+	+				+		+	+	+									
		80					+	+	+																	
		100					+	+	+																	
		120						+	+	+																

1693	vaseline	TR	0	0	+	+	+	+	+		+	+		+	-	+	+							+	+	+
TR	-	0	0	0	+	+	+		+	0			+		+	+						+	+	+		
TR		-	0	0	+	+	+				0				+	+										
TR					+	+	+								+	+										
TR					+	+	+								+	+										
TR					+	+	+								+	+										
1694	vaseline oil paraffin oil	TR	+	+	+	+	+	+	+		+	+		+	-	+	+	+	+		+	+	+	+	+	+
TR	+	+	+	+	+	+	+		+	+		+		+	+	+	+		+	+	+	+	+	+		
TR	0	+	0	0	+	+	+		+	0		0		+	+	+	+		+	+	+	+	+	+		
TR					+	+	+		0								+	+		+	+	+	+	+		
TR					+	+	+											+		+	+	+	+	+		
TR					+	+	+										+		+	+	+	+	+	+		
1695	vinyl acetate acetic acid vinyl ester CH3CO2CH=CH2 C4H6O2	TR	-	+	+	+		+	+	-	-	+		-	-	-	-	+	+		+	+	+	+	+	+
TR		+	0	0		+	+			0						+	+		+	+	+	+	+	+		
TR		0				+	+									+	+		+	+	+	+	+	+		

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537
1696	vinyl chloride	gf	TR, GK	20	-	0	-	-	+	+	+			-		-	-	0	0	+								
chloroethylene H2C=CHCl C2H3Cl		gf	TR, GK	40		-			+	+	+							0	0	+								
		gf	TR, GK	60					+	+	+							0	0									
		gf	TR, GK	80					+	+	+																	
		gf	TR, GK	100					+	+	+																	
1697	viscose spinning solutions			20	+	+	+	+	+	+	+		-	+		-	+	+	+									
				40	+	+	+	+	+	+	+			+			+	+	+									
				60	+	+	+	+	+	+	+			+			+	+	+									
				80						+	+																	
				100						+	+																	
1698	1-tetracosanol		TR	20	+	0	0	0	+	+	+		-	0		+	-	+	+				+	+	+			
wax alcohol			TR	40	+	0	0	0	+	+	+			0		+		+	+				+	+	+			
lignoceryl alcohol			TR	60	+	-	-	-	+	+	+			-		+		+	+				+	+	+			
CH3(CH2)22CH2OH			TR	80						+	+												+	+	+			
C24H50O			TR	100						+	+												+		+			
1702	water, condensed			20	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+		+	+	+			
condensed water H2O				40	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+		+	+	+			
				60	0	+	+	+	+	+	+	+		+		+	0	+	+	+	+		+	+	+			
				80					+	+	+	-				0		+	+	+	+		+	+	+			
				100					+	+	+										+	+		+		+		
1703	water, seawater			20	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	0	0	+
seawater				40	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	0	0	+
				60	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	-	-	+
				80			+	+	+	+	+	-		+			+	+	+	+	+	+	+	+	+			+
				100					+	+	+									+	+	+	+		+			+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																										
			Hast-C 2,4537	V4A 1,4571	V2A 1,4301	ZrO2	Al2O3 Sensor	Al2O3	Carbon	SSiC	FFKM	FKM+	FKM = FPM	EPDM	NBR	HG1	PEEK	PSU	PA12	FEP, PFA	PTFE	PVDF	PP-GF30	PP	PE	PVC-U		
1704	water, mineral water	20	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		40	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		60	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		80	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		100	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
1705	water, pure	20	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		40	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		60	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		80	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		100	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
1706	water, traces of butanol and phenol	20	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		40	-	-		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		60	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		80	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		100	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
1708	hydrogen	20	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		40	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		60	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		80	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		100	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			
		120	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+			

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																	
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon
1711	brandy	20	+	+	+	+	+	+	+		-	+		+	+	+	+			
		40	+	+	+	+	+	+	+			+		+	+	+	+			
		60	+	+	+	+	+	+	+			+		+	+	+	+			
		80					+	+	+						+	0	0			
		100					+	+	+											
		120						+	+											
1712	wine vinegar	H 20	+	+	+	+	+	+	+	-	+	+		-	+	0	0			
		H 40	+	+	+	+	+	+	+		+	+			0	-	-			
		H 60	+	+	+	+	+	+	+		+	+			-					
		H 80			+	+	+	+	+		0	+								
		H 100			-	-	+	+	+			-								
1713	L(+)-tartaric acid tartaric acid, naturally HO ₂ CCH(OH)CH(OH)CO ₂ H C ₄ H ₆ O ₆	wä GL 20	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+
		wä GL 40	+	+	+	+	+	+	+	0		+		+	0	+	+	+	+	+
		wä GL 60	0	+	+	+	+	+	+	0		+		0	-	+	+	+	+	+
		wä GL 80					+	+	+									+		
		wä GL 100					+	+	+									+		
1715	xylene (mixture of isomers) dimethylbenzene (mixture of isomers) C ₆ H ₄ (CH ₃) ₂ C ₈ H ₁₀	TR 20	-	-	0	0	+	+	+		-	0		-	-	+	+	+	+	+
		TR 40	-	-	-	-	+	+	+			-				0	0	+	+	+
		TR 60	-	-	-	-	0	+	+			-				-	-	+	+	+
		TR 80		-	-	-	0	+	+			-				-	-	+	+	+
		TR 100					0	+	+									+	+	+
		TR 120					-	+	+									+		+

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

	Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1.4301	V4A 1.4571	Hast-C 2.4537		
1716	zinc carbonate basic	zinc hydroxide carbonate 2ZnCO3 • 3Zn(OH)2 C2H6O12Zn5	wä	GL	20	+	+	+	+	+	+	+	+	+		+	+	+	+			+	+	+					
			wä	GL	40	+	+	+	+	+	+	+			+		0	+	+	+			+	+	+				
			wä	GL	60	+	+	+		+	+	+			+		-	+	+	+			+	+	+				
			wä	GL	80					+	+	+													+				
			wä	GL	100					+	+	+																	
1717	zinc chloride	ZnCl2 Cl2Zn	wä	10%	20	+	+	+	+	+	+		+	+		+	+	+	+		+		+	+	+				
			wä	10%	40	+	+	+	+	+	+	+		+	+		0	+	+	+		+		+	+	+			
			wä	10%	60	0	+	+	+	+	+	+			+		-	+	+	+		+		+	+	+			
			wä	10%	80					+	+	+										+		+	+	+			
			wä	10%	100					+	+	+										+							
			wä	50%	20	+	+	+	+	+	+	+		+	+		+	+	+	+		+		+	+	+			
			wä	50%	40	+	+	+	+	+	+	+		+	+		0	+	+	+		+		+	+	+			
			wä	50%	60	0		+	+	+	+	+			+		-	+	+	+		+		+	+	+			
			wä	50%	80					+	+	+										+		+	+	+			
			wä	50%	100					+	+	+										+							
			wä	GL	20	+	+	+	+	+	+	+		+	+		+	+	+	+		+		+	+	+			
			wä	GL	40	+	+	+	+	+	+	+		+	+		0	+	+	+		+		+	+	+			
			wä	GL	60	+	+	+	+	+	+	+			+		-	+	+	+		+		+	+	+			
			wä	GL	80	-	0			+	+	+										+		+	+	+			
			wä	GL	100					+	+	+										+							
1718	zinc nitrate	Zn(NO3)2 N2O6Zn	wä	GL	20	+	+	+	+	+	+			+		+	+	+	+				+	+	+				
			wä	GL	40	+	+	+	+	+	+	+			+		0	+	+	+				+	+	+			
			wä	GL	60	0	+	+	+	+	+	+			+		-	+	+	+				+	+	+			
			wä	GL	80			+	+	+	+	+			+									+	+	+			
			wä	GL	100					+	+	+												+		+			

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

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Chemical Resistance

Release Date: 2023-02-17

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Chemical Resistance

Release Date: 2023-02-17

		Condition	Concentration	Temperature [°C]	PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon	Al2O3	Al2O3 Sensor	ZrO2	V2A 1,4301	V4A 1,4571	Hast-C 2,4537	
1719	zinc hydrogenphosphate	wä	GL	20		+	+	+	+	+	+			+	+	+	+	+	+	+			+	+	+				
		wä	GL	40		+	+	+	+	+	+	+			+	+	0	+	+	+	+		+	+	+				
		wä	GL	60			+	+	+	+	+	+			+		-	+	+	+	+		+	+	+				
		wä	GL	80						+	+	+									+			+	+				
		wä	GL	100						+	+	+									+			+	+				
1720	zinc sulfate	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	60	0	+	+	+	+	+	+	+		+	+		-	+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	80			+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	
		wä	10%	100						+	+	+									+	+	+		+	+	+	+	
		wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
		wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	
		wä	GL	60	0	+	+	+	+	+	+	+		+	+		-	+	+	+	+	+	+	+	+	+	+	+	
		wä	GL	80			+	+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	
		wä	GL	100						+	+	+									+	+	+		+	+	+	+	
1721	tin(II) chloride	wä	VL	20	+	+	+	+	+	+	+		+	+		+	+	+	+		+		+	+	+	0	0	+	
		wä	VL	40	+	+	+	+	+	+	+			+	+		0	0	+	+		+		+	+	+	-	-	+
		wä	VL	60	0	+	+	+	+	+	+			+	+							+		+	+	+			+
		wä	VL	80					+	+	+											+		+	+	+			+
		wä	VL	100					+	+	+											+							
		wä	GL	20	+	+	+	+	+	+	+			+	+		+	+	+	+		+		+	+	+	-	-	+
		wä	GL	40	0	+	+	+	+	+	+	+		+	+		0	0	+	+		+		+	+	+			+
		wä	GL	60	0	+	+	+	+	+	+	+		+	+			-	+	+		+		+	+	+			+
		wä	GL	80		0	0	0	+	+	+	+			0							+		+	+	+			+
		wä	GL	100					+	+	+	+										+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material															
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM
1722	sugar sirup	20	+	+	+	+	+	+	+		+	+		+	+	+	+	+
		40	+	+	+	+	+	+	+		+	+		+	+	+	+	+
		60	0	+	+	+	+	+	+		+	+		+	+	+	+	+
		80			+	+	+	+	+			+		+	+	+	+	+
		100					+	+	+							+	+	+
1723	mixed acid: HNO3 12%, HF 5%	20				-	+	+	+	-						+	+	+
		40					+	+	+							+	+	+
		60					+	+	+							0	+	+
		80					+	+	+						-	0	+	+
		100						+	+								+	
1724	mixed acid: HNO3 20%, HF 5%	20				-	+	+	+	-						+	+	+
		40					+	+	+							+	+	+
		60					+	+	+							0	+	+
		80					+	+	+						-	0	+	+
		100						+	+								+	
1728	chloramine mixture: NaOCl + NH3	20	+				+	+	+							+	+	+
		40	+				+	+	+						-	-	-	+

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GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution
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Chemical Resistance

Release Date: 2023-02-17

1729	chloramine mixture: NaOCI + (NH4)2SO4	wä	x = 0,7	20	-				+	+	+					-	0	+	+	+	-	+	+	+		+	
		wä	x = 0,7	30					+	+	+						0	+	+	+		+	+	+		+	
NH2CI NaOCI x mol/L, (NH4)2SO4 0,5 mol/L																											
H2CIN P																											

1731	ethylenediaminetetraacetic acid disodium salt	wä	8,2% (GL)	20	+	+	+	+	+	+	+	+	+		+	+	+	+	+							
		wä	8,2% (GL)	40	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+						
		wä	8,2% (GL)	60		+	+	+	+	+	+	+	+	+		+	+	+	+	+						
		wä	8,2% (GL)	80		+	+	+	+	+	+	+	+	+		+	+	+	+	+						
		wä	8,2% (GL)	100						+	+								+	+						

1735	ethylenediaminetetraacetic acid tetrasodium salt	wä	10%	20					+	+					+	+	+	+	+							
		wä	10%	40					+	+					+	+	+	+	+							
		wä	10%	60					+	+					+	+	+	+	+							
		wä	10%	80					+	+					+	+	+	+	+							
		wä	10%	100					+	+								+	+							
		wä	44% (GL)	20					+	+					+	+	+	+	+							
		wä	44% (GL)	40					+	+					+	+	+	+	+							
		wä	44% (GL)	60					+	+					+	+	+	+	+							
		wä	44% (GL)	80					+	+					+	+	+	+	+							
		wä	44% (GL)	100					+	+								+	+							

Abbreviations: P = permeation problems possible; fe = humid; fl = liquid; gf = gaseous; tr = dry; wä = aqueous solution

GK = low concentration; GL = cold saturated solution; H = usual in trade; HK = high concentration; TR = technically pure; VL = diluted solution

+ = resistant; 0 = conditionally resistant; - = non-resistant

Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]	Material																			
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSIC	Carbon	Al2O3	Al2O3 Sensor
1739 2-butanol sec-butyl alcohol CH ₃ CH ₂ CH(OH)CH ₃ C ₄ H ₁₀ O	TR	20	+					+	+										+		+	+
	TR	40						+	+										+		+	+
	TR	60						+	+										+		+	+
	TR	80						+	+										+		+	+
	TR	100						+	+										+		+	+
1745 2-pentanol sec-amyl alcohol CH ₃ (CH ₂) ₂ CH(OH)CH ₃ C ₅ H ₁₂ O	TR	20						+	+										+		+	+
	TR	40						+	+										+		+	+
	TR	60						+	+										+		+	+
	TR	80						+	+										+		+	+
	TR	100						+	+										+		+	+
1763 ammonium iron(III) sulfate NH ₄ Fe(SO ₄) ₂ H ₄ FeNO ₈ S ₂	wä	10%	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	10%	60	0	+	+	+	+	+			+			+	+	+	+	+	+	+	+
	wä	10%	80			+	+	+	+			+			+	+	+	+	+	+	+	+
	wä	10%	100					+	+									+	+	+	+	+
	wä	GL	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	wä	GL	60	0	+	+	+	+	+			+			+	+	+	+	+	+	+	+
	wä	GL	80			+	+	+	+			+			+	+	+	+	+	+	+	+
	wä	GL	100					+	+									+	+	+	+	+

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Chemical Resistance

Release Date: 2023-02-17

Condition	Concentration	Temperature [°C]																		
			PVC-U	PE	PP	PP-GF30	PVDF	PTFE	FEP, PFA	PA12	PSU	PEEK	HG1	NBR	EPDM	FKM = FPM	FKM+	FFKM	SSiC	Carbon
2218	pivaloyl chloride	20						+	+										+	
		40						+	+										+	
		60						+	+										+	
		80						+	+										+	
		100						+	+										+	
2260	ethylene glycol monomethyl ether	20						+	+		-				+	-	+	+	+	+
		40						+	+						+		+	+	+	+
		60						+	+								+	+	+	+
		80						+	+								+	+	+	+
		100						+	+								+	+	+	+
2776	argon	20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		40	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		60	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		80		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		100			+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
		120					+	+	+					+	+	+	+	+	+	+

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