

Chemical Resistance Chart for Polyethylene

Sr. No.	Chemical	Concentration	Storage Temp.	
			20°C	60°C
1	Acetaldehyde	40%	0	N
2	Acetaldehyde	100%	0	N
3	Acetic Acid	10%	R	R
4	Acetic anhydride		N	N
5	Aceto-acetic-ester		R	R
6	Acetone		N	N
7	Acetonitrile		R	R
8	Acetyl salicylic acid		0	0
9	Acetylene		R	R
10	Acid acetic	100% aqueous	R	R
11	Acid acetic	60%	R	R
12	Acid acetic	Glacial	R	R
13	Acid adipic		R	0
14	Acid arsenic		R	R
15	Acid benzoic		R	R
16	Acid boric		R	R
17	Acid butyric		N	N
18	Acid carbonic		R	R
19	Acid chlorosulphonic		N	N
20	Acid chromic	Plating soln.	R	R
21	Acid citric		R	R
22	Acid cresylic (crud)		N	N
23	Acid quorosilicic	40%	R	R
24	Acid quorosilicon	Conc.	R	0
25	Acid Formic	3% aqueous	R	R
26	Acid Formic	10%	R	R
27	Acid Formic	25%	R	R
28	Acid Formic	50%	R	R
29	Acid Formic	100%	R	R
30	Acid Fumes		R	R
31	Acid gallic		R	R
32	Acid glycolic	30%	R	R
33	Acid hydrobromic	50%Aqueous	R	R
34	Acid hydrobromic	100%	R	R
35	Acid hydrochloric	10% aqueous	R	R
36	Acid hydrochloric	22%	R	R
37	Acid hydrochloric	Conc	R	R
38	Acid hydrocyanic	10%	R	R
39	Acid hydrofluoric	4% aqueous	R	R
40	Acid hydrofluoric	40%	R	R
41	Acid hydrofluoric	66%	R	R
42	Acid hydrofluoric	Conc	R	R
43	Acid hypochlorous		R	R
44	Acid lactic	10%	H	R
45	Acid lactic	100%	R	R
46	Acid maleic	25% aqueous	R	R
47	Acid maleic	50%	R	R
48	Acid maleic	Conc	R	R
49	Acid methylsulphuric	50% aqueous	R	R
50	Acid Nicotinac		R	R
51	Acid nitric	5% aqueous	R	R
52	Acid nitric	10%	R	R
53	Acid nitric	35%	R	R
54	Acid nitric	50%	N	N
55	Acid nitric	70%	N	N
56	Acid nitric	95%	N	N
57	Acid oleic		N	N
58	Acid oxalic		R	R
59	Acid palmitic		R	R
60	Acid perchloric	10%	R	R
61	Acid phosphoric	25% aqueous	R	R
62	Acid phosphoric	30%	R	R
63	Acid phosphoric	50%	R	R
64	Acid phosphoric	90%	R	0
65	Acid phosphoric	95% aqueous	0	N
66	Acid picric		R	0
67	Acid saicylic		R	R
68	Acid selenic		R	R
69	Acid silicic		R	R
70	Acid stearic		R	R
71	Acid sulphuric	10% aqueous	R	R
72	Acid sulphuric	20%	R	R
73	Acid sulphuric	30%	R	R
74	Acid sulphuric	40%	R	R
75	Acid sulphuric	50%	R	R
76	Acid sulphuric	60%	R	R
77	Acid sulphuric	70%	R	0

Sr. No.	Chemical	Concentration	Storage Temp.	
			20°C	60°C
78	Acid sulphuric	98%	0	N
79	Acid sulphurous	10%	R	0
80	Acid sulphurous	30%	N	N
81	Acid tannic		R	R
82	Acrylonitrile		R	R
83	Acid tartaric	10%	R	R
84	Alcohol allyl		R	N
85	Alcohol amyl		R	R
86	Alcohol benzyl		N	N
87	Alcohol butyl		R	R
88	Alcohol cetyl		N	N
89	Alcohol ethyl	40% aqueous	R	R
90	Alcohol ethyl	100%	R	R
91	Alcohol isopropyl		R	R
92	Alcohol methyl	6% aqueous	R	R
93	Alcohol methyl	100%	R	R
94	Alcohol propargyl		R	R
95	Alcohol turfuryl		R	N
96	Alcoholoetyl		R	R
97	Alcohols		R	R
98	Aliphatic esters		R	R
99	Alkyl chlorides		R	R
100	Allyl chloride		R	N
101	Alum R R			
102	Aluminium acetate		R	R
103	Aluminium chloride		R	R
104	Aluminium fluoride		R	R
105	Aluminium hydroxide		R	R
106	Aluminium oxalate		R	R
107	Aluminium sulphate		R	R
108	Ammonia Aqueous soln.		R	R
109	Ammonia s.g 0.88		R	R
110	Ammonia Dry gas		R	R
111	Ammonium bicarbonate		R	R
112	Ammonium carbonate		R	R
113	Ammonium chloride		R	R
114	Ammonium Fluoride		R	R
115	Ammonium hydrosulphide		R	R
116	Ammonium hydroxide		R	R
117	Ammonium metaphosphate		R	R
118	Ammonium nitrate		R	R
119	Ammonium oxalate		R	R
120	Ammonium persulphate		R	R
121	Ammonium sulphate		R	R
122	Ammonium sulphide		R	R
123	Ammonium thiocyanate		R	R
124	Amyl acetate		N	N
125	Amyl Alcohol	100%	R	R
126	Amyl chloride	100%	N	N
127	Aniline		N	N
128	Aniline hydrochloride		N	N
129	Aniline sulphate		0	N
130	Animal oils		0	N
131	Antimony trichloride		R	R
132	Antimony		R	R
133	Aqua regia	Conc.	N	N
134	Arcton 6		0	N
135	Aromatic Hydrocarbons		N	N
136	Aromatic solvents		R	N
137	Arsenic Salts		R	R
138	Ascorbic acid	10%	R	R
139	Barium Carbonate		R	R
140	Barium chloride		R	R
141	Barium hydroxide		R	R
142	Barium sulphate		R	R
143	Barium sulphide		R	R
144	Beer		R	R
145	Benzaldehyde		N	N
146	Benzene		N	N
147	Benzoyl peroxide		0	0
148	Bismuth carbonate		R	R
149	Bleach Lye	10%	R	R
150	Borax		R	R
151	Boron trifluoride		R	R
152	Brine		R	R
153	Bromide(K) solu.		R	R
154	Bromine Dry gas		N	N

R - Resistance • N - Non Resistance - Not recommended under any condition • O - Resistance in variable depending upon the exact condition of use as well as residual stresses in the container.

Chemical Resistance Chart for Polyethylene

Sr. No.	Chemical	Concentration	Storage Temp.	
			20°C	60°C
155	Bromine liquid		N	N
156	Bromine waten, Saturated aqueous		N	N
157	Butane		R	R
158	Butanediol		R	R
159	Butter		R	R
160	Butyraldehyde		N	N
161	Cadmium plating solu.		R	R
162	Calcium bisulphite		R	R
163	Calcium carbonate		R	R
164	Calcium chlorate		R	R
165	Calcium chloride Aqueous Soln.		R	R
166	Calcium hydrochlorite		R	R
167	Calcium hydroxide		R	R
168	Calcium nitrate		R	R
169	Calcium phosphate		R	R
170	Calcium sulphate		R	R
171	Calsium oxied		R	R
172	Camphor oil		O	N
173	Carbon dioxide		R	R
174	Carbon disulphide		N	N
175	Carbon monoxide		R	R
176	Carbon terachlor'ide		O	N
177	Castor O"		R	R
178	Cellulose paint		R	R
179	Chemical photograohic solu.		R	R
180	Chloral hydrate		N	N
181	Chlorine Dry gas		N	N
182	Chlorine Liquid		N	N
183	Chlorine water	2% aqueous	R	R
184	Chlorine water Sat.soln.		R	N
185	Chlorine Water		R	R
186	Chloroacetic acid		R	R
187	Chlorobenzene		N	N
188	Chloroform		D	N
189	Chrome alum		R	O
190	Cider		R	R
191	Coffee		R	R
192	Cola concentrates		R	R
193	Copper chloride		R	R
194	Copper cyanide		R	R
195	Copper fluride		R	R
196	Copper nitrate		R	R
197	Copper sulphate		R	R
198	Corn Oil		R	R
199	cottonseed Oil		R	R
200	Covonat Oil		R	R
201	Creosote		N	N
202	Cresols		N	N
203	Cupric chloride		R	R
204	Cupric nitrate		R	R
205	Cyclohexanone		N	N
206	Cyclohexanol		N	N
207	Detergents, synthetic (Normal User Condition)		R	R
208	Developers, photographic		R	R
209	Dextrin		R	R
210	Dextrose		R	R
211	Diazo Salt		R	R
212	Dibuty Phthalate		O	O
213	Dichlorobenzene		N	N
214	Diethyl ether		N	N
215	Diethyl glycol		R	R
216	Diethylketone		O	O
217	Dimethyl carbinol		R	O
218	Dimethylamine		N	N
219	Diocetyl phthalate		O	N
220	Disodium phosphate		R	R
221	Emulsifiers All conc.		R	R
222	Emulsions, photographic		R	R
223	Esters		O	O
224	Ether		N	N
225	Ethyl acetate .		O	N
226	Ethyl Benzene		N	N
227	Ethyl butyrate		O	N
228	Ethyl chloride		N	N
229	Ethyl Ether		N	N
230	Ethyl formate		N	N
231	Ethylene chloride		N	N
232	Ethylene dichloride		N	N
233	Ethylene glycol		R	R
234	Ethylene oxide		R	O
235	Fatty acid(>C6)		R	R

Sr. No.	Chemical	Concentration	Storage Temp.	
			20°C	60°C
236	Ferric chloride		R	R
237	Ferric nitrate		R	R
238	Ferric sulphate		R	R
239	Ferrous ammounium citrate		R	R
240	Ferrous chloride		R	R
241	Ferrous sulphate		R	R
242	Fish solubles		R	R
243	Fixing solution, photographic		R	R
244	Fluoboric Acid		R	R
245	Fluorine		O	N
246	Fluorosilic acid		R	R
247	Flurinated refrigerants		R	N
248	Formoldehyde	40% aqueous	R	R
249	Fructose		R	R
250	Fruit pulp		R	R
251	Fuel oil		O	N
252	Furfural		O	N
253	Furfuryl Alcohol		R	R
254	Gasoline		O	O
255	Gelatine		R	R
256	Gin		R	R
257	Giucose		R	R
258	Glycerine		R	R
259	Glycol		R	R
260	Grapesugar Sat.Soln.alc		R	R
261	Heptane		a	O
262	Hertiary Hexanol		R	R
263	Hexachlorobenzene		R	O
264	Hexadecanol		N	N
265	Hexamethylene diamine		R	R
266	Hexamine		R	R
267	Hexanol, Tertiary		R	R
268	Hydrazine		R	R
269	Hydrogen		R	R
270	Hydrogen bromide Dry		R	R
271	Hydrogen chloride Dry		R	R
272	Hydrogen peroxide	3% (10vols)	R	R
273	Hydrogen peroxide	12% (14vols)	R	R
274	Hydrogen peroxide	30% (100 vols)	R	N
275	Hydrogen peroxide	90% & above	R	N
276	Hydrogen phosphide		R	R
277	Hydrogen sulphide		R	R
278	Hydroquinone		R	R
279	Hypochlorites		R	R
280	Hypochlorites (Na 12-14%)		R	R
281	Inks Soln.		R	R
282	Iodine. Soln. in pot		O	N
283	Lead acetate Sat.Soln.		R	R
284	Lead arsenate		R	R
285	Lead nitrate		R	R
286	Lead perchlorate		O	O
287	Lead plating		R	R
288	Lead tera-ethyl		R	R
289	Lime(CaO)		R	R
290	Linseed oil		O	N
291	Liquid chloride		N	N
292	Lube oil		N	N
293	Lye		R	R
294	Maganese sulphate		R	R
295	Magnesium carbonate		R	R
296	Magnesium chloride		R	R
297	Magnesium hydroxide		R	R
298	Magnesium nitrate		R	R
299	Magnesium sulphate		R	R
300	Manganate,potassium(k)		R	R
301	Meat juices		R	R
302	Mercuric chloride		R	R
303	Mercuric cyanide		R	R
304	Mercurous nitrate		R	R
305	Mercury		R	R
306	Metallic soaps		R	O
307	Methanol		R	N
308	Methyl acetate		N	N
309	Methyl bromide		N	N
310	Methyl chloride		N	N
311	Methyl ethyl ketone		O	N
312	Methyl isobutyl ketone		N	N
313	Methylated spirit		R	R
314	Methylene chloride		O	N
315	Methylene chloride	100%	O	N
316	Milk		R	R
317	Mineral Oils		R	O

Chemical Resistance Chart for Polyethylene

Sr. No.	Chemical	Concentration	Storage Temp.	
			20°C	60°C
318	Moist air		R	R
319	Molasses		R	R
320	Monochlorobenzene		N	N
321	Monoethanolamine		N	N
322	Naphtha		O	N
323	Naphthalene		O	N
324	n-Butyl acetate		N	N
325	Nickel sulphate		R	R
326	Nicket Chloride		R	R
327	Nicket nitrate		R	R
328	Nicket plating Solu.		R	R
329	Nicotine		R	R
330	Nitrobenzene		N	N
331	n-Octane		R	R
332	n-Propyl Alcohol		R	R
333	Oxygen		R	O
334	Ozone		N	N
335	Paraffin		O	N
336	Pentachloride		R	R
337	Perchloroethylene		N	N
338	Petrol		N	N
339	Petroleum ether		N	N
340	Phenol		N	N
341	Phenol		R	R
342	Phosgene Gas		R	N
343	Phosphorous oxychloride		N	N
344	Phosphorous pentoxide		R	R
345	Phosphorous trichloride		R	R
346	Photographic developers		R	R
347	Photographic emulsions		R	R
348	Photographic fixing solution		R	R
349	Phthalic acid		R	R
350	Polyacrylic acid emulsions		R	R
351	Potassium acid sulphate		R	R
352	Potassium antimonate		R	R
353	Potassium bicarbonate		R	R
354	Potassium bisulphide		R	R
355	Potassium bisulphide		R	R
356	Potassium borate		R	R
357	Potassium bromate		R	R
358	Potassium bromide		R	R
359	Potassium carbonate		R	R
360	Potassium chlorate		R	R
361	Potassium chloride,		R	R
362	Potassium chromate		R	R
363	Potassium cuprocyanide		R	R
364	Potassium cyanide		R	R
365	Potassium dichromate		O	N
366	Potassium Ferocynide		R	R
367	Potassium Fluoride		R	R
368	Potassium hydroxide	1% aqueous	O	N
369	Potassium hydroxide	10%	R	R
370	Potassium hydroxide	Conc	O	N
371	Potassium hypochlorite		R	R
372	Potassium nitrate		R	R
373	Potassium perborate		R	R
374	Potassium perchlorate		R	R
375	Potassium permanganate		R	R
376	Potassium persulphate		R	R
377	Potassium phosphate		R	R
378	Potassium sulphate		R	R
379	Potassium sulphide		R	R
380	Potassium sulphite		R	R
381	Potassium Terricyanide		R	R
382	Potassium thiosulphate		R	R
383	Propylene chloride		R	R
384	Propylene dichloride		N	N
385	Propylene glycol		R	N
386	Pyridine		R	R
387	Resorcinol		R	R
388	Salicyl aldehyde		R	R
389	Sea water		R	N
390	shortening		R	R
391	Silicone fluids		O	N
392	Silver cyanide		R	R
393	Silver nitrate		R	R
394	Silver plating Solu.		R	R
395	Soap solution		R	R
396	Sodium acetate Saturated Sol		R	R
397	Sodium acid sulphate		R	R
398	Sodium aluminate		R	R
399	Sodium antimonate		R	R

Sr. No.	Chemical	Concentration	Storage Temp.	
			20°C	60°C
400	Sodium benzoate		R	R
401	Sodium bicarbonate		R	R
402	Sodium bisulphate		R	R
403	Sodium bisulphite		R	R
404	Sodium borate		R	R
405	Sodium bromide		R	R
406	Sodium carbonate		R	R
407	Sodium chlorate		R	R
408	Sodium chloride		R	R
409	Sodium cyanide		R	R
410	Sodium dichromate		R	R
411	Sodium ferricyanide		R	R
412	Sodium ferrocyanide		R	R
413	Sodium fluoride		R	R
414	Sodium hydroxide	1% aqueous	R	R
415	Sodium hydroxide	10%	R	R
416	Sodium hydroxide	40%	R	R
417	Sodium hydroxide Cone.		R	R
418	Sodium hypochloride	15% chlorine	R	R
419	Sodium hypochlorite		R	R
420	Sodium metaphosphate		R	R
421	Sodium nitrate		R	R
422	Sodium nitrite		R	R
423	Sodium Paraborate		R	R
424	Sodium peroxide		R	R
425	Sodium phosphate		R	R
426	Sodium silicate		R	R
427	Sodium sulphate	25%Aqueous	R	R
428	Sodium sulphate	Conc	R	R
429	Sodium sulphide		R	R
430	Sodium sulphite		R	R
431	Sodium thiosulphate		R	R
432	Sodiumperborate		R	R
433	Soft soap		R	R
434	Stannic chloride		R	R
435	Stannous chloride		R	R
436	Strach		R	R
437	Sugar syrups & Jams		R	R
438	Sulphamic acid		O	O
439	Sulphar chlorides		R	R
440	Sulphur Callodial		R	R
441	Sulphur Dry		R	R
442	Sulphur Moist		R	R
443	Sulphurtioxide		N	N
444	Surace active agents Normal		R	R
445	Tallow		R	R
446	Tanning extracts		R	R
447	Tetrahydrofuran		O	N
448	Tetrahydronaphthalene		N	N
449	Tin Plating Solu.		N	N
450	Titanium tetrachloride		N	N
451	Titanium trichloride		N	N
452	Toluene		O	O
453	Transform oil		O	N
454	Trichlore thylene		N	N
455	Trichloro benzene		N	N
456	Triethylene Glycol		R	R
457	Trisodium phosphate		R	R
458	Tristhanolamine		O	N
459	Tritoiyl phosphate		N	N
460	Trricsyl phosphate		O	N
461	Turpentine		O	N
462	Uria		R	R
463	Urine		R	R
464	Vanilla extract		R	R
465	Vegetabil oils		O	N
466	Vineger		R	R
467	Water		R	R
468	Wetting agents Normal		R	R
469	Wetting agents Dilutions		R	R
470	Whey		R	O
471	Whiskey		R	O
472	Wine and spirit		R	R
473	Xylene		O	O
474	Yeast		R	R
475	Zinc Bromide		R	R
476	Zinc carbonate		R	R
477	Zinc chloride		R	R
478	Zinc oxide		R	R
479	Zinc stearate		R	R
480	Zinc sulphate		R	R