Nitrile Glove Chemical Resistant Guide

pomona

CHEMICAL	SUPER NITRILE			
	EN 374-3 Class	Avg. BTT (min)	% degradation	Performance Rating
1. Acetaldehyde, 99.5%	-	-	-	P
2. Acetic Acid, 99+%	3	80	19	G
3. Acetone, 99.5%	-	-	-	NR
4. Acetonitrile, 99%	2	<15	16	G
5. Acrylic Acid, 99%	3	75	29	F
6. Ammonium Flouride, 40%	6	>480	2	E
7. Ammonium Hydroxide, 85%	5	320	1	G
8. Amyl Acetate, 100%	4	183	4	E
9. Amyl Alcohol, 99+%	6	>480	1	E
10. Aniline, 99+%	-	-	-	NR
11. Aqua Regia	5	280	6	E
12. Benzaldehyde, 99.5%	-	-	-	NR
13. Bromopropionic Acid, Sat.	6	>480	7	E
14. Butyl Acetate, 99+%	3	66	27	F
15. Butyl Alcohol, 99%	6	>480	0	E
16. Butyl Cellosolve, 99+%	6	>480	1	E
17. Butyrolactone, 99+%	-	-	-	NR
18. Carbon Disulfide, 99.9%	1	14	24	F
19. Carbon Tetrachloride, 99+%	6	>480	2	E
20. Cellosolve Acetate, 99+%	3	100	17	G
21. Chromic Acid, 50%	6	>480	10	E
22. Citric Acid, 10%	6	>480	1	E
23. Cyclohexanol, 98%	6	>480	1	E
24. Diacetone Alcohol, 99%	5	273	8	E
25. Dibutyl Phthalate, 99%	6	>480	1	E
26. Diethylamine, 99+%	2	25	19	G
27. Diisobutyl Ketone, 80%	6	>480	4	E
28. Dimethyl Acetamide, 99+%	-	-	-	NR
29. N,N-Dimethylformamide, 99+%	-	-	-	NR
30. Dimethyl Sulfoxide, 99+%	4	166	18	G
31. Dioctyl Phthalate, 99%	6	>480	12	G
32. 1, 4-Dioxane, 99.9%	-	-	-	NR
33. Epichlorohydrin, 99+%	-	-	-	NR
34. Ethyl Acetate, 99+%	-	-	-	NR
35. Ethyl Alcohol, 90+%	5	293	1	E
36. Ethyl Ether, 99+%	2	48	7	E
37. Ethyl Glycol Ether, 99%	4	151	23	F
38. Ethylene Glycol, 99+%	6	>480	0	E
39. Formaldehyde, 99%	6	>480	0	E
40. Formic Acid, 95+%	3	60	43	P
41. Freon TF, 99+%	6	>480	2	P
42. Furfural, 99%	-	-	-	NR
43. Gasoline, White, 100%	6	>480	1	E
44. Gluteraldehyde 5%	6	>480	3	E
45. Hexamethyldisilazine, 97%	6	>480	1	E
46. Hexane, 99+%	6	>480	4	E
47. Hydrazine, 65%	5	388	4	E
48. Hydrochloric Acid, 10%	6	>480	8	E
49. Hydrochloric Acid, 38%	6	>480	8	E
50. Hydrofluoric Acid, 48%	6	>480	18	G
51. Hydrogen Peroxide, 30%	6	>480	8	E

BTT — Breakthrough time

EN 374-3 — European Union Chemical Permeation Test Standard

E	Excellent
G	Good
F	Fair
P	Poor
NR	Not Recommended

EN Class Index	Permeation Time (Minute)
0	< 10 min.
1	> 10 min.
2	> 30 min.
3	> 60 min.
4	> 120 min.
5	> 240 min.
6	> 480 min

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52. Hydroquinone, Sat.	6	>480	10	E
53. Isobutyl Alcohol, 99+%	6	>480	6	E
54. Iso-Octane, 99%	6	>480	1	E
55. Isopropyl Alcohol, 99+%	6	>480	4	E
56. Kerosene, 100%	6	>480	6	E
57. Lactic Acid, 85%	6	>480	6	E
58. Lauric Acid, 36%	5	>450	6	E
59. Maleic Acid, Saturated	6	>480	2	E
60. Methyl Alcohol, 99.9+%	2	59	11	G
61. Methylamine, 40%	6	>480	6	E
62. Methyl t-Butyl Ether, 99.8%	5	393	1	E
63. Methyl Cellosolve, 99%	3	80	23	F
64. Methyl Ethyl Ketone, 99+%	-	-	-	NR
65. Mineral Spirits, Rule 66, 100%	6	>480	3	E
66. Monoethanolamine, 99+%	6	>480	4	E
67. Morpholine, 99%	-	-	-	NR
68. Muriatic Acid, 100%	6	>480	8	E
69. Naptha VM & P, 100%	6	>480	3	E
70. N-Methyl-2-Pyrrolidone, 99+%	-	-	-	NR
71. Nitric Acid, 10%	6	>480	4	E
72. Nitric Acid, 70%	-	-	-	NR
73. Nitrobenzene, 99%	-	-	-	NR
74. Nitromethane, 95.5%	0	7	63	NR
75. Nitropropane, 95.5%	-	-	-	NR
76. Octyl Alcohol, 99+%	6	>480	7	E
77. Oleic Acid, 99+%	6	>480	7	E
78. Oxalic Acid, 12.5%	6	>480	7	E
79. Palmitic Acid, Sat.	4	236	10	E
80. Pentachlorophenol, 35%	4	160	10	E
81. Pentane,98%	6	>480	2	E
82. Percloric Acid, 60%	6	>480	9	E
83. Phenol, 90%	-	-	-	NR
84. Phosphoric Acid, 85%	5	450	13	E
85. Potassium Hydroxide, 50%	6	>480	10	E
86. Propyl Acetate, 99%	1	28	105	NR
87. Propyl Alcohol, 96+%	6	>480	1	E
88. Pyridine, 99%	-	-	-	NR
89. Rubber Solvent, 100%	6	>480	7	E
90. Sodium Hydroxide, 50%	6	>480	17	G
91. Stoddard Solvent, 99%	6	>480	7	E
92. Sulfuric Acid, 47%	6	>480	15	G
93. Sulfuric Acid, 95%	-	-	-	NR
94. Tannic Acid, 37.5%	5	>325	2	E
95. 1,1,2,2-Tetrachloroethane, 99%	1	15	217	NR
96. Tetrachloroethylene, 100%	5	350	247	NR
97. Toluene, 99+%	1	19	16	NR
98. 1,1,1-Trichloroethane, 99%	3	76	5	E
99. Tricresyl Phosphate, 90%	5	330	17	G
100. Triethanolamine, 85%	-	-	15	G
101. Turpentine, 100%	6	>480	5	E
102. Xylene, 99%	3	64	8	E

Data shown from the following charts are the results of laboratory test as per ASTM/EN standard and are intended to serve as a guide only. The data is obtained from samples collected randomly.

The data is not an absolute basis for glove selection as testing was done in strict laboratory conditions. Actual working conditions may dictate the performance of the product. Factors such as glove reuse, thermal conditions, chemical mixtures, abrasion, cuts and punctures may also affect the performance of the glove.

It is also noted that permeation and degradation do not always correlate. A glove may have a good result in permeation breakthrough time but it may degrade (swell, gets weaker or softer) easily, thus rated P/NR. There are cases whereby the glove may be badly damaged by the chemical, in this case permeation breakthrough time is not applicable as the glove will not offer any protection to end use. End users are advised to do their evaluation when selecting a glove for a specific application in an actual working condition.

This chart does not serve as a warranty for the performance of the glove in any specific work application.

ISO 14001
ISO 9001