

POLYMERICA PRODUCT DATA



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MasterShield
Chemical Resistance Guide

Chemical Resistance Guide

Polymerica's MasterShield Construction Polymers are manufactured to satisfy critical performance requirements in industrial, commercial, institutional, and architectural applications.

The following information presents chemical resistance guidelines to be used when evaluating the potential performance of a product in a given chemical exposure. **Unless otherwise noted, all data herein is based upon service at 100°F. (38°C)**

Substrate and effluent temperatures as well as the length of exposure time will affect the ability of our products to resist chemical attack. If the chemical exposure is a combination of several chemical components in a proprietary mixture, we strongly recommend field immersion testing before making a final product selection.

The information contained in this bulletin has been derived from evaluation of field installations, laboratory testing, and analysis. Consideration of mechanical design requirements has not been incorporated into these evaluations. We encourage consultation with our technical staff in the selection of appropriate coating, lining, and surfacing systems for any questionable situation.

Resistance ratings are indicative of film integrity and do not necessarily indicate resistance to staining or loss of gloss.

For the sake of simplicity, most of our products belong to one of the five 'families' listed at the top of every page:

Vinyl Ester Novolac Products:

VNB, VNC, VW, VNS

Epoxy Novalac Products:

NEB, NEC, NEL, NES

Chemically Resistant Epoxy Products:

CRB, CRC, CRF, CRG, CRL, CRM, CRS, LSC, LSS

Decorative & Industrial Epoxy Products:

DEC, DES, EPS, EQP, EQR, ETS, IEB, IEC, IEP, IES, MVP, PAS, PFS, RRB, RSC, SLE, STS, WEC, WEP, WPC

Elastomeric Products:

CJC, EJC, EWM, PEM, PJC

Key:	I	Suitable for continuous service or immersion
	C	Suitable for secondary containment (72 hour immersion) or intermittent immersion, followed by regulated clean-up.
	L	Limit use to splash and spillage, followed by regulated spill removal and clean-up within four hours.
	T	Consult Polymerica Technical Department for evaluation assistance
	NR	Not recommended
	*	These chemicals will attack silica fillers and glass reinforcement. Carbon or synthetic reinforcement may be required.

CHEMICAL EXPOSURE	Vinyl Ester Novolac Products	Epoxy Novolac Products	Chemically Resistant Epoxy Products	Decorative& Industrial Epoxy Products	Elastomeric Products	Universal Surfacer
1. ACETIC ACID - 10%	I	I	C	L	L	L
2. ACETIC ACID – 50%	I	C	L	L	L	L
3. ACETIC ACID – 100%	I	L	NR	NR	NR	L
4. ACETONE	C	L	L	L	L	L
5. ACRYLIC ACID	I	C	L	NR	NR	L
6. ACRYLONITRILE	T	T	NR	NR	NR	L
7. ADIPIC ACID	I	I	C	L	L	C
8. ALCOHOL (ETHYL)	I	C	C	L	L	L
9. ALCOHOL (METHEL)	I	C	C	L	L	L
10. ALLYLCHLORIDE	I	C	L	L	L	L
11. ALUM	I	I	C	C	C	I
12. ALUMINUM BROMIDE	I	C	C	L	L	L
13. ALUMINUM CHLORIDE	I	I	C	L	L	L
14. ALUMINUM FLUORIDE*	I	C	C	L	L	L
15. ALUMINUM HYDROXIDE	I	I	C	L	L	L
16. ALUMINUM NITRATE	I	I	C	L	L	L
17. ALUMINUM SULFATE	I	C	C	L	L	L
18. AMMONIUM CHLORIDE	I	I	C	L	L	L
19. AMMONIUM FLUORIDE*	I	I	C	L	L	L
20. AMMONIUM HYDROXIDE	I	I	C	L	L	L
21. AMMONIUM LIGNO SULFATE – 50%	I	I	C	L	L	L
22. AMMONIUM NITRATE	I	I	I	C	C	L
23. AMMONIUM PERSULFATE	I	I	I	C	C	L
24. AMMONIUM SULFATE	I	I	I	C	C	L
25. AMMONIUM SULFIDE	I	I	I	C	C	L
26. AMMONIUM SULFITE	I	I	I	C	C	L
27. AMYLACETATE	I	C	L	L	L	L
28. AMYLALCOHOL	I	C	C	L	L	C
29. ANILINE	I	L	NR	NR	NR	L
30. AQUA REGIA	T	NR	NR	NR	NR	NR
31. ARESENIC ACID	I	C	C	C	C	L
32. ARSENOUS ACID	I	C	C	C	C	L
33. BARIUM HYDROXIDE	I	I	C	C	C	I
34. BARIUM SULFATE	I	I	C	C	C	I
35. BENZALDEHYDE	I	NR	T	T	T	L
36. BENZENE	I	C	L	L	L	L
37. BENZENE SULFONIC ACID – 50%	I	C	L	L	L	L
38. BENZYL ALCOHOL	I	NR	NR	NR	NR	L
39. BENZYL CHLORIDE	I	T	NR	NR	NR	L
40. BLACK LIQUOR (PULP AND PAPER)	I	C	C	C	C	L
41. BLEACH LIQUOR (PULP AND PAPER)*	I	C	C	L	L	L
42. BLEACH – 5.5%	I	T	L	L	L	I

BORIC ACID - DIMETHYL FORMAMIDE

CHEMICAL EXPOSURE	Vinyl Ester Novolac Products	Epoxy Novolac Products	Chemically Resistant Epoxy Products	Decorative& Industrial Epoxy Products	Elastomeric Products	Universal Surfacer
43. BORIC ACID	I	I	I	I	I	I
44. BRINE	I	I	I	I	I	I
45. BROMINE WATER – 5%	I	L	L	L	L	L
46. BUTADIENE	T	T	L	L	L	L
47. BUTYLACETATE	I	C	L	L	L	L
48. BUTYALCOHOL	I	C	C	L	L	L
49. BUTYL CARBITOL	I	C	L	L	L	L
50. BUTYRIC ACID	I	C	NR	NR	NR	L
51. CADMIUM PLATING (CYANIDE)	I	C	L	L	L	L
52. CALCIUM BISULFITE*	I	C	L	L	L	L
53. CALCIUM CARBONATE	I	I	I	I	I	C
54. CALCIUM CHLORIDE	I	I	I	I	I	I
55. CALCIUM HYDROXIDE*	I	I	I	I	I	I
56. CALCIUM HYPOCHLORITE – 5%*	I	L	L	L	L	L
57. CALCIUM NITRATE	I	I	I	I	I	I
58. CAPRYLIC ACID	I	NR	NR	NR	NR	I
59. CARBON TETRACHLORIDE	I	C	L	L	L	L
60. CASTOR OIL	I	I	I	I	I	I
61. CHLORINE DIOXIDE*	I	NR	NR	NR	NR	C
62. CHLORINE WATER (SATURATED)	I	NR	NR	NR	NR	L
63. CHLORACETIC ACID – 50%	I	NR	NR	NR	NR	C
64. CHLOROBENZENE	I	L	L	NR	NR	C
65. CHLOROFORM	L	L	NR	NR	NR	L
66. CHLOROSULFONIC ACID	NR	NR	NR	NR	NR	L
67. CHROMIC ACID – 10%	I	L	L	L	L	L
68. CHROMIC ACID – 30%	C	NR	NR	NR	NR	NR
69. CITRIC ACID	I	I	C	L	L	I
70. CORN OIL	I	I	C	L	L	I
71. CORN STARCH	I	I	C	L	L	I
72. CORN SUGAR	I	C	L	L	L	I
73. COTTONSEED OIL	I	I	C	L	L	I
74. CRESYLIC ACID	I	NR	NR	NR	NR	C
75. CRUDE OIL (SOUR/SWEET)	I	I	I	C	C	L
76. CYCLOHEXANE	I	I	I	L	L	C
77. DEMINERALIZED WATER	I	I	I	I	I	I
78. DEXTROSE	I	I	C	L	L	I
79. DIBUTYL PHTHALATE	I	I	C	L	L	L
80. DICHLOROBENZENE	I	NR	NR	NR	NR	L
81. DIESEL FUEL	I	I	C	C	C	I
82. DIETHYLENE GLYCOL	I	C	C	C	L	L
83. DIMETHYL FORMAMIDE	T	NR	NR	NR	NR	L

ETHYL ACETATE - JET FUEL

CHEMICAL EXPOSURE	Vinyl Ester Novolac Products	Epoxy Novolac Products	Chemically Resistant Epoxy Products	Decorative & Industrial Epoxy Products	Elastomeric Products	Universal Surfacer
84. ETHYL ACETATE	I	L	L	NR	NR	L
85. ETHYL ALCOHOL	I	C	C	C	C	L
86. ETHLY BENZENE	I	L	L	L	L	L
87. ETHYL ETHER	T	T	T	T	T	L
88. ETHYL SULFATE	I	C	L	L	L	C
89. ETHYLENE DICHLORIDE (TO 80°F)	I	L	NR	NR	NR	C
90.ETHYLENE GLYCOL	I	I	C	C	C	I
91. FATTY ACIDS	I	L	T	T	T	L
92. FERRIC ACETATE	I	I	C	C	C	L
93. FERRIC CHLORIDE	I	I	C	C	C	L
94. FERRIC NITRATE	I	I	C	C	C	L
95. FERRIC SULFATE	I	I	C	C	C	I
96. FERROUS CHLORIDE	I	I	C	C	C	I
97. FERROUS NITRATE	I	I	C	C	C	I
98. FLUOBORIC ACID *	I	T	L	L	L	L
99. FLUOSILICIC ACID – 35%	I	T	L	L	L	L
100. FORMALDEHYDE	I	C	L	L	L	L
101. FORMIC ACID	I	L	NR	NR	NR	L
102. FURFURAL	NR	NR	NR	NR	NR	L
103. FURFURALALCOHOL	I	L	L	L	L	L
104. GASOLINE	I	I	I	C	C	C
105. GLUCOSE	I	I	C	L	L	C
106. GLYCERINE	I	I	I	I	I	C
107. GLYCOLIC ACID – 70%	I	L	NR	NR	NR	L
108. GRAPE JUICE	I	I	I	I	I	I
109. GREEN LIQUOR	I	C	C	L	L	I
110. HEPTANE	I	I	C	C	C	L
111. HEXANE	I	I	C	C	C	L
112. HYDRAZINE – 35%	T	NR	NR	NR	NR	L
113. HYDROBROMIC ACID – 60%	I	L	L	L	L	L
114. HYDROCHLORIC ACID – 37%	I	C	C	C	C	L
115. HYDROFLUORIC ACID – 10%*	I	NR	NR	NR	NR	L
116. HYDROGEN PEROXIDE – 30%	I	L	NR	NR	NR	L
117. HYDROGEN SULFIDE (WET/DRY)	I	T	T	T	T	L
118. HYPOCHLOROUS ACID – 30%	I	L	L			L
119. ISOPROPYLALCOHOL	I	I	C	C	C	L
120. JET FUEL, JP-4	I	I	C	C	C	I

KEROSENE - POTASSIUM SULFATE

CHEMICAL EXPOSURE	Vinyl Ester Novolac Products	Epoxy Novolac Products	Chemically Resistant Epoxy Products	Decorative& Industrial Epoxy Products	Elastomeric Products	Universal Surfacer
121. KEROSENE	I	I	C	C	C	C
122. LACTIC ACID – 20%	I	C	C	L	L	L
123. LEAD ACETATE	I	I	I	C	C	C
124. LINSEED OIL	I	I	I	C	C	C
125. LITHIUM HYPOCHLORITE*	I	NR	NR	NR	NR	L
126. MAGNESIUM SULFATE	I	I	I	I	I	C
127. MALEIC ACID	I	I	C	C	C	L
128. METHYL ALCOHOL	I	C	C	C	C	C
129. METHYL ETHYL KETONE (MEK)	I	C	L	L	L	L
130. METHYL ISOBUTYL KETONE	I	C	L	L	L	L
131. METHYLENE CHLORIDE	NR	C	NR	NR	NR	L
132. MINERAL OIL	I	I	I	I	I	I
133. NAPHTHA	I	I	C	L	L	L
134. NICKLE CHLORIDE	I	I	C	L	L	C
135. NITRIC ACID – 10%	I	L	L	L	L	L
136. NITRIC ACID – 40%	I	NR	NR	NR	NR	L
137. NITRIC ACID – 60%	C	NR	NR	NR	NR	L
138. NITRIC ACID (FUMES)	I	NR	NR	NR	NR	L
139. OILS (ANIMAL)	I	I	I	C	C	C
140. OILS (MINERAL)	I	I	I	I	I	C
141. OILS (VEGETABLE)	I	I	I	I	I	C
142. OXALIC ACID (SATURATED)	I	L	L	L	L	C
143. PERCHLORIC ACID – 30%	I	NR	NR	NR	NR	L
144. PERCHLORETHYLENE	I	C	L	L	L	L
145. PHENOL – 10%	I	L	L	NR	NR	L
146. PHOSPHORIC ACID (CONCENTRATED)	I	NR	NR	NR	NR	L
147. SUPERPHOS	I	NR	NR	NR	NR	C
148. PHTHALIC ACID	I	C	T	T	T	C
149. POTASSIUM ALUM SULFATE	I	I	C	C	C	C
150. POTASSIUM CYANIDE	I	C	L	L	L	C
151. POTASSIUM DICHROMATE	I	C	C	L	L	C
152. POTASSIUM FERRICYANIDE	I	C	L	L	L	C
153. POTASSIUM HYDROXIDE – 10%*	I	I	I	I	I	C
154. POTASSIUM HYDROXIDE (CONCENTRATED)	NR	C	L	L	L	L
155. POTASSIUM NITRATE	I	I	I	I	I	C
156. POTASSIUM PERMANGANATE	I	C	C	L	L	C
157. POTASSIUM PEERSULFATE	I	C	C	L	L	C
158. POTASSIUM SULFATE	I	I	C	C	C	C

PROPYLENE GLYCOL - TARTARIC ACID

CHEMICAL EXPOSURE	Vinyl Ester Novolac Products	Epoxy Novolac Products	Chemically Resistant Epoxy Products	Decorative& Industrial Epoxy Products	Elastomeric Products	Universal Surfacer
159. PROPYLENE GLYCOL	I	I	I	I	I	C
160. PULPSTOCK (CHLORINATED)*	I	L	L	L	L	C
161. PYRIDINE	NR	T	NR	NR	NR	NR
162. SALICYLIC ACID	I	C	L	L	L	L
163. SEA WATER	I	I	I	I	I	C
164. SILVER NITRATE	I	I	C	C	C	C
165. SKYDROL*500B	I	I	C	C	C	C
166. SODIUM ACETATE	I	I	I	C	C	C
167. SODIUM BICARBONATE*	I	I	I	C	C	C
168. SODIUM BIFLUORIDE*	I	C	L	L	L	C
169. SODIUM BISULFATE	I	I	I	I	I	C
170. SODIUM BISULFITE	I	I	I	I	I	C
171. SODIUM BROMATE	I	C	C	C	C	C
172. SODIUM CARBONATE*	I	I	I	C	C	C
173. SODIUM CHLORATE	I	L	L	L	L	C
174. SODIUM CHLORIDE	I	I	I	I	I	C
175. SODIUM CHLORITE – 50%*	I	NR	NR	NR	NR	C
176. SODIUM CYANIDE	I	C	L	L	L	C
177. SODIUM DICHROMATE	I	C	C	L	L	L
178. SODIUM FLUORIDE	I	C	L	L	L	L
179. SODIUM HYDROSULFIDE	I	T	T	T	T	L
180. SODIUM HYDROXIDE – 10%	I	I	I	I	I	C
181. SODIUM HYDROXIDE – 50%	I	I	I	C	C	L
182. SODIUM HYPOCHLORITE – 5%	I	C	NR	NR	NR	L
183. SODIUM HYPOCHLORITE – 15%	I	NR	NR	NR	NR	L
184. SODIUM PHOSPHATE	I	C	C	C	C	C
185. SODIUM SILICATE	I	I	C	L	L	C
186. SODIUM SULFATE	I	I	I	I	I	C
187. SODIUM TARTRATE	I	I	I	I	I	C
188. SODIUM THIOSULFATE	I	I	I	C	C	C
189. STYRENE	I	L	NR	NR	NR	L
190. SUCCINIC ACID	I	C	L	L	L	L
191. SUGAR	I	I	C	L	L	I
192. SULFATE/SULFITE LIQUORS (PULP AND PAPER)	I	I	I	I	I	L
193. SULFURIC ACID – 10%	I	I	I	I	I	C
194. SULFURIC ACID – 20%	I	I	I	I	I	L
195. SULFURIC ACID – 50%	I	I	C	L	L	L
196. SULFURIC ACID – 70%	C	I	L	NR	NR	L
197. SULFURIC ACID – 98%	L	I	L	NR	NR	NR
198. TANNIC ACID	I	C	L	L	L	L
199. TARTARIC ACID	I	I	I	I	I	L

TETRAHYDROFURAN- ZINC SALTS

CHEMICAL. EXPOSURE	Vinyl Ester Novolac Products	Epoxy Novolac Products	Chemically Resistant Epoxy Products	Decorative& Industrial Epoxy Products	Elastomeric Products	Universal Surfacer
200. TETRAHYDROFURAN	T	T	NR	NR	NR	NR
201. THIONYL CHLORIDE	NR	T	NR	NR	NR	NR
202. TOLUENE	I	C	C	C	C	C
203. TOLUENE SULFONIC ACID	I	C	C	L	L	NR
204. 1-1-1 TRICHLOROETHANE	I	C	L	L	L	L
205. TRICHLOROETHANE (TCE)	C	C	L	L	L	L
206. TRICHLORACETIC ACID-20%	I	NR	NR	NR	NR	NR
207. TRISODIUM PHOSPHATE (TSP)	I	I	I	I	I	I
208. TURPENTINE	I	I	C	C	C	L
209. UREA SOLUTIONS	I	I	I	I	I	C
210. VINEGAR	I	I	I	C	C	C
211. VINYL TOLUENE	I	L	NR	NR	NR	L
212. WATER (DISTILLED AND DEMINERALIZED)	I	I	I	I	I	I
213. WHITE LIQUOR (PULP AND PAPER)	I	I	I	I	I	C
214. XYLENE	I	C	C	C	C	C
215. ZINC SALTS	I	I	I	I	I	C

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 - L** Limit use to splash and spillage, followed by regulated spill removal and clean-up within four hours.
 - T** Consult Polymerica Technical Department for evaluation assistance
 - NR** Not recommended
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