

CHEMICAL RESISTANCE GUIDE

PROLOGUE

Many chemicals, dilutions and solutions that exist in an agricultural, pharmaceutical or industrial environments are alphabetically presented in the following chart. The chemical resistance characteristics has either been derived from laboratory testing (at standard conditions of 77 ±2 °F (25 ±1.1 °C) and 50% relative humidity, in-service/actual field experience or by rating the chemical according to known physical properties or characteristics. Service conditions may be complicated or complex due to a variety of effluent or chemical mixtures at undisclosed concentrations with temperature fluctuations and other unknown or unanticipated conditions at various dwell times that may exist episodically at the specific job site. Applying a test patch or patches prior to choosing & installing a system is always advisable. After the test patches are fully cured, expose them to the anticipated service conditions whether actual or simulated. Test patches will help determine the suitability of your product selection as to the specific service needs and may potentially establish any required cleaning, recoating and/or repair regimen. The system rates the product's integrity and does not account for weathering resistance, staining or gloss loss.

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.						
COLOR CODE: ACI 350 R4.5.1.4								
GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C								
GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE		CRACKBOND® ERP* CRACKBOND® 2300 GEL ULTRABOND® 1 & 2 ULTRABOND® HS-200 ULTRABOND® 1300 ULTRABOND® 1300-FG	CRACKBOND® 2100 MV CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
1	ACETIC ACID See dilutions of Acetic Acid							
2	ACETIC ACID <5% (Vinegar)	D	C	B				C
3	ACETIC ACID 5%	D	C	B				D
4	ACETIC ACID 10%	C	D	C	B	C	B	D
5	ACETIC ACID 25%	X	X	X				X
6	ACETIC ACID 40%					X		
7	ACETIC ACID 50%	D	D	C				D
8	ACETIC ACID (Glacial)	X	X	X	B			X
9	ACTIVATED CARBON (Except when agitated then place in Group 3B)	A	A	A				A
10	ACTIVATED CARBON (When not agitated in Group 2)	A	A	A				A

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times less < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.												
COLOR CODE: ACI 350 R4.5.1.4 GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE		CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
11	ACTIVATED SILICA, when not agitated (Formed from Silicate & Acid diluted)	B	A	A									A	
12	ALUMINUM CHLORIDE (Solution)	D	C	B									C	
13	ALUMINUM CHLORIDE	C	C	C									C	
14	ALUMINUM CHLOROHYDRATE (Polyaluminum Chloride)	A	A	A									A	
15	ALUMINUM POTASSIUM SULFATE (See Potassium Aluminum Sulfate)													
16	ALUMINUM SULFATE (Alum)	C	C	D									D	
17	ALUMINUM SULFATE - 48.5%	D	D	C									D	
18	ALUMINUM SULFATE (Alum) - 15%	B	A	A									B	
19	ANHYDROUS AMMONIA (gas)	D	C	C									C	
20	AMMONIA, AQUEOUS SOLUTION - 5%	D	C	C					C		B		C	
21	AQUA AMMONIA at up to 29.4% (Aqueous Solution <29.4%)	D	C	C				B					D	
22	AMMONIA SILICOFLUORIDE	C	B	B									C	
23	AMMONIUM HYDROXIDE (Ammonia) - 28%	C	C	C									C	
24	AMMONIUM HYDROXIDE (Ammonia) - 10%	B	B	A									B	
25	AMMONIUM HYDROXIDE	D	D	D									D	
26	AMMONIUM NITRATE	C	C	C									C	
27	AMMONIUM NITRATE - 15%	C	B	B									D	
28	AMMONIUM NITRITE	C	C	C									C	
29	AMMONIUM SULFATE - 15%	D	C	C									D	
30	AMMONIUM SULFATE	B	B	B									B	
31	BENTONITE	B	B	B				B		C			B	
32	BROMINE	X	X	X									X	

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS

ADHESIVES TECHNOLOGY CORP.

COLOR CODE:

ACI 350 R4.5.1.4

- GROUP 1**
- GROUP 2**
- GROUP 3A**
- GROUP 3B**
- GROUP 3C**

GENERIC CHEMICAL TESTING

*EPOXY REPAIR PASTE

	CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
33	BROMINE WATER - 5%	C	C	B									C
34	CALCIUM CARBONATE, suspended in water	D	D	C	B	C	C	C					D
35	CALCIUM CARBONATE	B	C	C									C
36	CALCIUM HYDROXIDE, suspended in water	B	B	B	B	C	B	B					B
37	CALCIUM HYDROXIDE	B	B	B									B
38	CALCIUM HYPOCHLORITE	B	B	A									B
39	CALCIUM HYPOCHLORITE - (Chlorinated Lime) - 15%	D	D	D									D
40	CALCIUM HYPOCHLORITE - 5%*	C	C	C									C
41	CALCIUM OXIDE	C	B	B									B
42	CALCIUM OXIDE - 5%	A	A	A									A
43	CARBON DIOXIDE (gas) ^^	C	B	B									C
44	CARBON DIOXIDE (SOLUTION = CARBONIC ACID)	C	B	B									B
45	CHLORINE (Solution) at 0.35%	C	B	B									C
46	CHLORINE, gas	D	C	C									C
47	CHLORINE DIOXIDE (Solution)	D	D	D									D
48	CHLORINATED WATER (Up to saturated)	D	D	D							D	C	D
49	CITRIC ACID at 34%	D	D	D	C	D	C	D	C	D	C	D	D
50	CITRIC ACID	C	C	C	C	C	C	C	C	C	C	C	C
51	COPPER SULFATE, will also stain	C	C	C									C
52	CYANIDE (See - Sodium or Potassium Cyanide)												
53	DIATOMACEOUS EARTH	A	A	A									A
54	DISODIUM PHOSPHATE	D	D	D									D

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.												
COLOR CODE: ACI 350 R4.5.1.4 GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C		CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE														
55	DOLOMITIC HYDRATED LIME	D	C	C										C
56	DOLOMITIC LIME	A	A	A										A
57	FERRIC CHLORIDE at up to 45%	D	D	D										D
58	FERRIC CHLORIDE - 45%	D	D	D										D
59	FERRIC CHLORIDE - Iron (III) Chloride - 15%	D	D	D										D
60	FERRIC CHLORIDE	A	A	A										A
61	FERRIC SULFATE at up to 50%	D	D	C										D
62	FERRIC SULFATE - 50%	D	D	D										D
63	FERRIC SULFATE	A	A	A										A
64	FERROUS CHLORIDE at up to 35%	D	D	C										D
65	FERROUS CHLORIDE - Iron (III) Chloride - 15%	C	C	B										C
66	FERROUS CHLORIDE	B	B	B										B
67	FERROUS SULFATE at 19%	A	A	A										A
68	HYDROCHLORIC ACID - Concentrated	X	X	X	X	X	X	X	X	X	X	X	X	X
69	HYDROCHLORIC ACID - 37%	D	C	C										C
70	HYDROCHLORIC ACID at up to 37% and 150 °F	D	D	D										D
71	HYDROCHLORIC ACID - 20%										D			
72	HYDROCHLORIC ACID - 10%	C	C	C						D				C
73	HYDROFLUORIC ACID - 10%	X	X	X										X
74	HYDROGEN, gas	A	A	A										A
75	HYDROGEN PEROXIDE at 50%	X	X	X									X	X
76	HYDROGEN PEROXIDE - 30%	X	X	D							D			X

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times less < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.												
COLOR CODE: ACI 350 R4.5.1.4 GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C		CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE														
77	HYDROGEN PEROXIDE - 10%	D	D	D									D	D
78	HYDROGEN PEROXIDE - 3%	C	B	B										B
79	HYDROGEN SULFIDE	D	C	C										D
80	HYDROGEN SULFIDE - 100%	C	C	C										C
81	HYDROGEN SULFIDE - 5%	C	C	C										D
82	HYDROGEN SULFIDE (Wet/Dry)	X	D	D										X
83	IODINE (May stain)	C	C	C										C
84	MAGNESIUM SULFATE	C	B	A										C
85	METHANOL (Methyl Alcohol)	D	D	D	D	D	D	D	D	D	D	D	D	D
86	METHYL ALCOHOL (See Methanol)													
87	OXYGEN, (Gas)	A	A	A										A
88	OZONE, (Gas) for immersion coat with aliphatic coating or paraffinic wax	C	C	C										C
89	PHOSPHORIC ACID - 10%	B	B	A	B								B	B
90	PHOSPHORIC ACID - 40%	C	C	C									X	C
91	PHOSPHORIC ACID at 85%	X	X	X	X	X	X	X	X	X	X	X	X	X
92	POLYMER, (Emulsion)	A	A	A										A
93	POLYMER, (Mannich)	A	A	A										A
94	POLYALUMINUM CHLORIDE (See Aluminum Chlorohydrate)													
95	POLYPHOSPHATE (See Zinc Orthophosphate)													
96	POTASSIUM ALUMINUM SULFATE (aka: Potassium alum & KAl(SO4)2)	C	C	C										C
97	POTASSIUM CYANIDE	C	C	C										C
98	POTASSIUM HYDROXIDE - 10%	C	C	C	B	C	B	C	B	C	B	C	B	C

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times less < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.												
COLOR CODE: ACI 350 R4.5.1.4 GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE		CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
99	POTASSIUM HYDROXIDE when 15% or less ^	C	C	B								B	C	
100	POTASSIUM HYDROXIDE when more than 15%	D	D	D								B	D	
101	POTASSIUM HYDROXIDE (POTASH LYE) - 40%	D	D	D	B								D	
102	POTASSIUM HYDROXIDE (CONCENTRATED)	D	D	D									D	
103	POTASSIUM PERMANGANATE - 10%	C	B	B									C	
104	POTASSIUM PERMANGANATE	D	C	C									C	
105	POTASSIUM PERSULFATE	D	D	D									D	
106	POTASSIUM SULFATE	C	C	C									C	
107	SODIUM ALUMINATE at 40%	C	C	B									C	
108	SODIUM BICARBONATE - 10%	A	A	A									A	
109	SODIUM BICARBONATE ^^	B	A	A									B	
110	SODIUM BISULFATE at 38%	C	B	B									C	
111	SODIUM BISULFATE	C	C	C									C	
112	SODIUM CARBONATE - 2%	A	A	A	B	C						B	A	
113	SODIUM CARBONATE - 15%	B	A	A	B	C						B	B	
114	SODIUM CARBONATE (Soda ash) ^	B	B	B	B	C							B	
115	SODIUM CHLORIDE (Dry)	B	B	A									B	
116	SODIUM CHLORIDE (Solution)	B	A	A	B	C							B	
117	SODIUM CHLORIDE - 15%	B	A	A	B	C							B	
118	SODIUM CHLORIDE	B	B	A									B	
119	SODIUM CHLORIDE (Saturated Solution)	X	X	X									X	
120	SODIUM CHLORITE at 25%	D	C	C									D	

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.												
COLOR CODE: ACI 350 R4.5.1.4 GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE		CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
121	SODIUM CHLORITE - 50%	X	X	X									X	
122	SODIUM CYANIDE	C	C	C									C	
123	SODIUM FLUORIDE - 10%	A	A	A									A	
124	SODIUM FLUORIDE	X	X	X									X	
125	SODIUM FLUROSILICATE 5% (Sodium Silicon Fluoride 5%)	A	A	A									A	
126	SODIUM HEXAFLUROSILICATE (See Sodium Fluorosilicate)													
127	SODIUM HEXAMETAPHOSPHATE	A	A	A									A	
128	SODIUM HYDROXIDE - 10%	A	A	A	D	D	D	D	D	D	D	D	A	
129	SODIUM HYDROXIDE when less than 20%	B	A	A	D							D	B	
130	SODIUM HYDROXIDE when greater than 20% and up to 150 °F	B	B	B									B	
131	SODIUM HYDROXIDE - 50%	A	A	A	X							X	A	
132	SODIUM HYPOCHLORITE - 5%	D	X	B										
133	SODIUM HYPOCHLORITE at up to 15%	D	X	B									C	
134	SODIUM HYPOCHLORITE - 15%	X	X	X									X	
135	SODIUM PHOSPHATE (See Trisodium Phosphate - 10%)													
136	SODIUM PHOSPHATE	B	B	B									B	
137	SODIUM SILICATE	D	C	C	B	C	B	D	D	D	D	D	D	
138	SODIUM SILICATE - 50%	D	D	D	D	D	D	D	D	D	D	D	D	
139	SODIUM SILICATE (Water Glass)	C	C	C	D	D	D	D	D	D	D	D	C	
140	SODIUM SILICOFLUORIDE (Dry and Wet) (See Sodium Fluorosilicate)													
141	SODIUM SULFATE	C	C	C									C	
142	SODIUM SULFITE	C	C	C									C	

RATING SYSTEM & KEY

- A** = Long term immersion - suggested for continuous exposure to this chemical - life expectancy may vary
- B** = Short term immersion - suggested for exposure not to exceed 72 hours
- C** = Long term splash & spill - suggested for exposure times < 8-10 hour work shift before removal
- D** = Short term exposure splash spill - suggested for exposure times < 1 hour
- X** = Not suggested for exposure to this chemical

CHEMICAL EXPOSURE REAGENTS		ADHESIVES TECHNOLOGY CORP.												
COLOR CODE: ACI 350 R4.5.1.4 GROUP 1 GROUP 2 GROUP 3A GROUP 3B GROUP 3C GENERIC CHEMICAL TESTING *EPOXY REPAIR PASTE		CRACKBOND® ERP*	CRACKBOND® 2300 GEL	ULTRABOND® 1 & 2	ULTRABOND® HS-200	ULTRABOND® 1300	ULTRABOND® 1300-FG	CRACKBOND® 2100 MV	CRACKBOND® 2100 MV-LPL	ULTRABOND® HS-1CC	ULTRABOND® 365CC	ULTRABOND® ACRYL-8CC	ULTRABOND® HYB-2CC	ULTRABOND® EPX-3CC
143	SODIUM THIOSULFATE	C	C	C									C	
144	SULFUR DIOXIDE (Gas)	C	B	A									C	
145	SULFUR DIOXIDE at 1 percent (Solution)	A	A	A									A	
146	SULFURIC ACID - 3%													
147	SULFURIC ACID - 10%	C	C	C	C	D	C	C					C	
148	SULFURIC ACID - 20%	C	C	C									C	
149	SULFURIC ACID - 30%	C	C	C	D								C	
150	SULFURIC ACID - 50%	D	D	D									D	
151	SULFURIC ACID - 70%	X	X	X		X							X	
152	SULFURIC ACID up to 98% and 150 °F	X	X	X	X								X	
153	SULFURIC ACID (Concentrated) - 98%	X	X	X	X								X	
154	SUPERPHOS (See Calcium Diorthophosphate)													
155	TETRASODIUM PYROPHOSPHATE	B	B	B									B	
156	TRISODIUM PHOSPHATE (TSP or Sodium Phosphate) - 10%	A	A	A	B	C	B	A					A	
157	TRISODIUM PHOSPHATE (TSP)	B	B	B	C	D	C	B					B	
158	ZINC ORTHOPHOSPHATE (Polyphosphate)	C	C	C									C	
159	ZINC SULFATE	D	D	D									D	

^ or ^ = Cautionary statement for surrounding concrete with respect to alkali-reactive aggregates (ASR)
^^ or ^^ = Cautionary statement for fresh concrete: Carbonation may occur