

**CHEMICAL RESISTANCE GUIDE**

The following Chemical Resistance Guide will aid in determining the effect of various chemicals to Valspar's **EC-7 COATING**. Results are based on ASTM D-1380 procedure. Two samples were prepared based on a Clear and a color base mixed with Epoxy Color Add, Light Gray (ECA). Each system was mixed and applied to a panel sealed with Valspar's Primer in accordance to Valspar's standard specifications. The coatings were allowed to cure for a minimum of 7 days @ 77 °F prior to testing. A rating system for this guide is as follows:

**Film Integrity**

1. Unaffected
2. Affected but area usable after drying
3. Partially Destroyed in contacted area
4. Contacted area destroyed

**Staining**

- |                               |   |
|-------------------------------|---|
| <b>A.</b> Unaffected          | <b>G.</b> Stained but removed by soap and water               |
| <b>B.</b> Brown Stain         | <b>H.</b> Stained but removed with xylene or abrasive cleaner |
| <b>C.</b> White Stain         | <b>I.</b> Loss of Gloss                                       |
| <b>D.</b> Color Lightened     | <b>J.</b> Green or Blue Stain                                 |
| <b>E.</b> Yellow Stain        | <b>K.</b> Gray Stain  |
| <b>F.</b> Red or Orange Stain |   |

**ORGANIC ACIDS**

	CLEAR		W/ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Acetic Acid 5%	1E	2E	2A	2A
Acetic Acid 10%	1E	2E	2A	2E
Acetic Acid 20%	1E	2E	2A	2E
Glacial Acetic Acid	1E	2E	2i	2Ei
Butyric Acid 10%	1Ei	2Ei	2A	2E
Cresylic 10%	1E	2E	2A	2E
Formic Acid 10%	1E	2E	2A	2A
Lactic Acid 10%	1Ei	2E	2i	3i
Lactic Acid 25%	1Ei	2Ei	2i	3i
Maleic Acid 30%	1Ei	2Ei	2i	2i
Maleic Acid 60%	1Ei	2Ei	2i	2i
Malic Acid 50%	1Ei	2Ei	2i	2i
Monoacetic Acid 5%	1E	2E	2A	2Bi
Monoacetic Acid 10%	1E	2B	2B	3Bi
Oleic Acid	1Ei	2Ei	2i	3i
Oxalic Acid Sat.	1i	2i	2i	2i
Picric Acid Sat.	1E	2Ei	1E	2Ei

**INORGANIC ACIDS**

	CLEAR		W/ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Acetic Acid 50%	1A	2i	1A	2E
Boric Acid Sat.	1E	2E	1A	2E
Chromic Acid 2%	1A	2E	1A	2B
Chromic Acid 10%	1B	2B	1B	2B
Chromic Acid 15%	1B	2Bi	1B	2B
Hydrochloric Acid 10%	1i	2i	1A	2i
Hydrochloric Acid 37%	1i	2i	2i	2i
Hydrochloric Acid Conc	1i	2Bi	2i	2Fi
Hydrofluoric Acid 10%	1i	2i	2A	2Ei
Hydrofluoric Acid 24%	1A	1Ei	2A	2Ei
Nitric Acid 10%	2i	2Ei	2E	2BE
Nitric Acid 30%	2Ei	3BEi	2BE	2BE
Nitric Acid Over 40%	2Ei	3BEi	2BE	2BE

**INORGANIC ACIDS CONT.**

	CLEAR		W/ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Nitric Acid Conc	3BEi	3BEi	3BE	4
Perchloric Acid 35%	1A	2i	1A	2Di
Phosphoric Acid 10%	2i	2i	2i	2Ci
Phosphoric Acid 35%	2i	2i	2Ci	2Ci
Phosphoric Acid 75%	2i	2i	2Ci	2Ci
Sulfuric Acid 25%	2i	2i	2A	2D
Sulfuric Acid 50%	2i	2Fi	2A	2Di
Sulfuric Acid 70%	2i	2Fi	2i	2Di
Sulfuric Acid Conc.	3i	4	3Fi	4

**ALKALIES AND SALTS**

	CLEAR		W/ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Aluminum Chloride 50%	1A	1A	1A	1A
Ammonium Chloride 50%	1A	1A	1A	1A
Ammonium Hydroxide 10%	1A	1A	1A	1A
Ammonium Hydroxide 20%	1A	1A	1A	1A
Ammonium Hydroxide 50%	1A	1A	1A	1A
Ammonium Nitrate Sat.	1A	1A	1A	1A
Ammonium Persulfate Sat.	1A	2i	1B	2Bi
Ammonium Sulfate Sat.	1A	1A	1A	1A
Calcium Chloride 50%	1A	1A	1A	1A
Calcium Hydroxide Sat	1A	1A	1A	2A
Calcium Hypochlorite 15%	1A	1A	1A	1A
Ferric Chloride	1B	1B	1B	1B
Ferric Sulfate	2A	2i	2A	2i
Potassium Hydroxide 40%	1A	1A	1A	1A
Sodium Bicarbonate Sat.	1A	1A	1A	1A
Sodium Bisulfate Sat.	1i	2i	2A	2i
Sodium Carbonate Sat.	1A	1A	1A	1A
Sodium Chloride 20%	1A	1A	1A	1A
Sodium Hydroxide 10%	1A	1A	1A	1A
Sodium Hydroxide 50%	1A	1A	1A	1A
Sodium Hypochlorite 10%	1A	1A	1A	1A

ALKALIES AND SALTS CONT.				
	CLEAR		W/ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Sodium Sulfate Sat.	1A	1A	1A	1A
Sodium Sulfide Sat.	1A	1A	1A	1A
Trisodium Phosphate 10%	1A	2A	1A	1A

SOLVENTS				
	CLEAR		W/ ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Acetone	1i	2Bi	2E	2Ei
Benzene	1i	2Ei	2A	2i
Butyl Acetate	1i	2Ei	2E	2B
Carbon Tetrachloride	1A	2Ei	1A	2i
Chlorobenzene	1A	2Ei	1i	2i
Cyclohexane	1A	1A	1A	1A
Cyclohexanone	1A	1A	1A	2E
Chloroform	1A	2E	2A	2i
Diacetone Alcohol	2i	3Ei	1E	2E
Ethyl Actate	1i	2Ei	2A	2Fi
Ethyl Alcohol	2A	2Ei	2A	2Ei
Ether	2A	2Ei	1A	2E
Ethylene Dichloride	1A	2E	2A	2i
Methyl Alcohol	1A	2Ei	2A	2Fi
Methyl Ethyl Ketone	2A	2Ei	1A	2Bi
Methyl Isobutyl Ketone	1Ei	2Ei	1A	2i
Methyk Salicycate 50% in Toluene	2A	3Ei	2A	3A
Methylene Chloride	2Ei	3Ei	1A	2i
Mineral Spirits	1A	1A	1A	1A
Naphtha	2E	2E	1E	2E
Perchloroethane	1A	1A	1A	1A
Toluene	n/a	n/a	1Bi	2Bi
Trichloreethylene	2A	2E	2A	2Fi
Xylene	2A	2Ei	1A	2i
Gasoline	2A	2Ei	1A	2Ei
Hexane	n/a	n/a	n/a	n/a
SC-100	n/a	n/a	n/a	n/a
PM Acetate	1A	2Ei	1E	2Bi

MISCELLANEOUS CHEMICALS				
	CLEAR		W/ ECA	
	SPLASH	24 HR.	SPLASH	24 HR.
Arcylonitrile	2A	2Ei	2A	2i
Aniline	2Ei	4	1B	3B
Beer	1A	2i	1A	1A
Bromine	3Ei	4	4	4
Butyl Lactat	1E	2F	2E	2F
Carbon Disulfide	1A	2E	1A	2A
Corn Oil	1A	1A	1A	1A
Diethyl Phthalate	2A	2i	1A	2A
Dimethyl Phthalate	2A	2i	1A	2A
Ethylene Glycol	1A	1A	1A	1A
Formaldehyde	1i	1i	1A	2A
Glycerine	1A	1A	1A	1A
Hydrogen Peroxide	1A	2A	1A	1A
Fruit Juice	1A	1E	1A	2E
Lanoline	1A	1A	1A	1A
Mustard	1E	1E	1E	1E
Phenol 5%	1B	3B	3B	4
Pyridine	1E	2Ei	2i	3i
Sydrol 500A	1E	2E	2iE	2iE
Sugar Soln. Sat	1A	1A	1A	1A
Tiacetin	1A	1A	1A	1A
Triethylene Glycol	1A	1A	1A	2A
Water	1A	1A	1A	1A
Wine	1E	1B	1B	1B
Ketchup	1A	1E	1A	1A
Brake Fluid	2E	2Ei	2A	2i
Motor Oil	1A	1A	1A	1A
Grease	1A	1A	1A	1A
Tide Soln.	1A	1A	1A	1A
1,1,1 Trichloroethane	1A	1A	1A	1A
2-Nitro Propane	1E	2E	2A	2Ei
Turpentine	1A	1E	1A	2B
Jet Fuel A-1	1A	1A	1A	1A
Cola	1A	1A	1A	1A
10% Citric	2A	2i	2A	2i
Isopropyl Alcohol	2A	2i	1A	2i
Transmission Fluid	1A	1A	1A	1A
Amyl Acetate	1A	2A	2A	2Ei
Triethanolamine	1A	1A	1A	1A
Tannic Acid	1K	2K	1K	1K
Tartaric Acid	1A	2i	2A	2i
Betadine Solution	1A	2E	1A	1E
Urine	1A	1A	1A	1E

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