

# PRODUCT SPECIFICATION SHEET

**Product Name: Eagle Manufacturing® Bollard Posts and Machine Guards**

| Part #                       | Dimension         | Plate Size          | Weight |
|------------------------------|-------------------|---------------------|--------|
| <b>Bollard Posts</b>         |                   |                     |        |
| EM-1742                      | 24"H x 4.5" Dia   | 8"W x 8"D x 3/8"H   | 35 lbs |
| EM-1743                      | 36"H x 4.5" Dia   | 8"W x 8"D x 3/8"H   | 45 lbs |
| EM-1744                      | 42"H x 4.5" Dia   | 8"W x 8"D x 3/8"H   | 50 lbs |
| EM-1755                      | 24"Hx x5.6" Dia   | 10"W x 10"D x 3/8"H | 45 lbs |
| EM-1756                      | 36"H x 5.6" Dia   | 10"W x 10"D x 3/8"H | 60 lbs |
| EM-1757                      | 42"H x 5.6" Dia   | 10"W x 10"D x 3/8"H | 67 lbs |
| EM-1752                      | 24"H x 5" Dia     | 10"W x 10"D x 3/8"H | 35 lbs |
| EM-1753                      | 36"H x 5" Dia     | 10"W x 10"D x 3/8"H | 47 lbs |
| EM-1754                      | 42"H x 5" Dia     | 10"W x 10"D x 3/8"H | 53 lbs |
| EM-1763                      | 36"H x 6.625" Dia | 10"W x 10"D x 3/8"H | 65 lbs |
| EM-1764                      | 42"H x 5.625" Dia | 10"W x 10"D x 3/8"H | 72 lbs |
| <b>Machine Guards</b>        |                   |                     |        |
| <b>Replacement Post Caps</b> |                   |                     |        |
| EM-1749                      | 5" Diameter       | N/A                 | 2 lbs  |
| EM-1758                      | 5.85" Diameter    | N/A                 | 2 lbs  |
| EM-1759                      | 5.25" Square      | N/A                 | 2 lbs  |

## Chemical Resistance Guide

S = Satisfactory   O = Some Attack   U = Unsatisfactory

| Reagent                        | 70° F<br>(21° C) | 140° F<br>(60° C) | Reagent                  | 70° F<br>(21° C) | 140° F<br>(60° C) |
|--------------------------------|------------------|-------------------|--------------------------|------------------|-------------------|
| Acetaldehyde                   | S                | O                 | Castor oil conc.         | S                | S                 |
| Acetic acid 1-10%              | S                | S                 | Catsup                   | S                | S                 |
| Acetic acid 10-50%             | S                | O                 | Caustic soda             | S                | O                 |
| Acetic acid 50-100%            | S                | O                 | Cedar leaf oil           | U                | U                 |
| Acetic anhydride               | S                | S                 | Cedar wood oil           | U                | U                 |
| Acetone                        | S                | S                 | Chlorine liquid          | O                | U                 |
| Acids, aromatic                | S                | S                 | Chlorobenzene            | O                | U                 |
| Acrylic emulsions              | S                | S                 | Chloroform               | U                | U                 |
| Adipic acid                    | S                | S                 | Chlorosulfonic acid 100% | U                | U                 |
| Aluminum chloride dilute       | S                | S                 | Chrome alum sat'd.       | S                | S                 |
| Aluminum chloride conc.        | S                | S                 | Chromic acid 10-20%      | S                | O                 |
| Aluminum fluoride conc.        | S                | S                 | Chromic acid 50%         | S                | O                 |
| Aluminum sulfate conc.         | S                | S                 | Cider                    | S                | S                 |
| Alume (all ltypes) conc.       | S                | S                 | Cinnamon                 | S                | S                 |
| Amino acetic acid              | S                | S                 | Cinnamon oil             | U                | U                 |
| Ammonia 100% dry gas           | S                | S                 | Citric acid sat'd.       | S                | S                 |
| Ammonium acetate               | S                | S                 | Citronella oil           | O                | U                 |
| Ammonium bromide               | S                | S                 | Cloves (ground)          | S                | S                 |
| Ammonium carbonate             | S                | S                 | Coconut oil alcohols     | S                | S                 |
| Ammonium chloride sat'd.       | S                | S                 | Cod liver oil            | S                | S                 |
| Ammonium fluoride 20%          | S                | S                 | Coffee                   | S                | S                 |
| Ammonium hydroxide             | S                | S                 | Copper chloride sat'd.   | S                | S                 |
| Ammonium metaphosphates sat'd. | S                | S                 | Copper cyanide sat'd.    | S                | S                 |
| Ammonium nitrate sat's.        | S                | S                 | Copper fluoride 2%       | S                | S                 |
| Ammonium persulfate sat'd      | S                | S                 | Copper nitrate sat'd.    | S                | S                 |
| Ammonium phosphate             | S                | S                 | Copper sulfate dilute    | S                | S                 |

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|-----------------------------|------------------|-------------------|--------------------------|------------------|-------------------|
| Ammonium sulfate sat'd.     | S                | S                 | Corn oil                 | S                | S                 |
| Ammonium sulfide sat'd.     | S                | S                 | Cottonseed oil           | S                | S                 |
| Ammonium thiocyanate sat'd. | S                | S                 | Cranberry sauce          | S                | S                 |
| Amyl acetate 100%           | O                | U                 | Creola                   | S                | O                 |
| Amyl alcohol 100%           | S                | S                 | Cuprous chloride sat'd   | S                | S                 |
| Amyl chloride 100%          | O                | U                 | Cuprous oxide            | S                | S                 |
| Aniline 100%                | S                | U                 | Cyclohexane              | U                | U                 |
| Anise seed oil              | O                | U                 | Cyclohexanone            | U                | U                 |
| Antimony chloride           | S                | S                 | Decalin                  | S                | U                 |
| Aqua regia                  | O                | U                 | Detergents synthetic     | S                | S                 |
| Aromatic hydrocarbons       | U                | U                 | Developers photographic  | S                | S                 |
| Arsenic                     | S                | S                 | Dextrin saturated        | S                | S                 |
| Aspirin                     | S                | S                 | Dextrose saturated       | S                | S                 |
| Barium carbonate sat'd.     | S                | S                 | Dibutyl ether            | O                | U                 |
| Barium chloride saturated   | S                | S                 | Dichlorobenzene (O&P)    | U                | U                 |
| Barium hydroxide            | S                | S                 | Diethylene glycol        | S                | S                 |
| Barium sulfate saturated    | S                | S                 | Disodium phosphate       | S                | S                 |
| Barium sulfide saturated    | S                | S                 | Dioxane                  | S                | S                 |
| Beer                        | S                | S                 | Emulsions photographic   | S                | S                 |
| Benzaldehyde                | S                | O                 | Ether                    | O                | O                 |
| Benzene                     | O                | U                 | Ethyl acetate 100%       | O                | O                 |
| Benzene sulfonic acid       | S                | S                 | Ethyl alcohol 100%       | S                | S                 |
| Benzic acid - Crystals      | S                | S                 | Ethyl alcohol 35%        | S                | S                 |
| Benzic acid - Saturated     | S                | S                 | Ethylbenzene             | O                | U                 |
| Bismuth carbonate sat'd.    | S                | S                 | Ethylene glycol          | S                | S                 |
| Black liquor                | S                | S                 | Ferric chloride sat'd.   | S                | S                 |
| Bleach lye 10%              | S                | S                 | Ferric nitrate sat'd.    | S                | S                 |
| Borax cold saturated        | S                | S                 | Ferrous ammonium citrate | S                | S                 |
| Boric acid dilute           | S                | S                 | Ferrous chloride sat'd.  | S                | S                 |
| Brine                       | S                | S                 | Ferrous sulfate          | S                | S                 |
| Bromic acid 10%             | S                | S                 | Fluoboric acid           | S                | S                 |
| Bromine liquid 100%         | O                | U                 | Fluorine                 | S                | U                 |
| Bromochloromethane          | U                | U                 | Fluosilicic acid 32%     | S                | S                 |

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|-----------------------------------|------------------|-------------------|-------------------------|------------------|-------------------|
| Butadiene                         | U                | U                 | Fluosiic acid conc.     | S                | S                 |
| Butanediol 10%                    | S                | S                 | Formaldehyde 10-30%     | S                | S                 |
| Butanediol 60%                    | S                | S                 | Formaldehyde 30-40%     | S                | O                 |
| Butanediol 100%                   | S                | S                 | Formic acid 20%         | S                | S                 |
| Butter                            | S                | S                 | Formic acid 50%         | S                | S                 |
| Butyl acetate 100%                | O                | U                 | Formic acid 100%        | S                | S                 |
| Butyl alcohol 100%                | S                | S                 | Fructose saturated      | S                | S                 |
| Butylene glycol                   | S                | S                 | Fuel oil                | S                | U                 |
| Butylic acid 100%                 | S                | S                 | Furtural 100%           | O                | U                 |
| Caffeine citrate saturated        | S                | S                 | Furturyl alcohol        | S                | O                 |
| Calcium bisulfide                 | S                | S                 | Galtic acid saturated   | S                | S                 |
| Calcium bromide                   | S                | S                 | Gasoline                | S                | U                 |
| Calcium carbonate sat'd.          | S                | S                 | Glucose                 | S                | S                 |
| Calcium chlorate saturated        | S                | S                 | Glycerin                | S                | S                 |
| Calcium chloride saturated        | S                | S                 | Glycol                  | S                | S                 |
| Calcium hydroxide                 | S                | S                 | Glycolic acid 30%       | S                | S                 |
| Calcium hypochloride bleach sol'n | S                | S                 | Grape juice             | S                | S                 |
| Calcium nitrate 50%               | S                | S                 | Grapefruit juice        | S                | S                 |
| Calcium sulfate                   | S                | S                 | Heptane                 | O                | U                 |
| Camphor crystals                  | S                | S                 | Hexachlorobenzene       | S                | S                 |
| Camphor oil                       | U                | U                 | Hexane                  | U                | U                 |
| Carbon dioxide 100% dry           | S                | S                 | Hydrobromic acid 50%    | S                | S                 |
| Carbon dioxide 100% wet           | S                | S                 | Hydrochloric acid 10%   | S                | S                 |
| Carbon dioxide cold sat'd.        | S                | S                 | Hydrochloric acid 30%   | S                | S                 |
| Carbon disulphide                 | O                | U                 | Hydrochloric acid 35%   | S                | S                 |
| Carbon monoxide                   | S                | S                 | Hydrocyanic acid        | S                | S                 |
| Carbon tetrachloride              | U                | U                 | Hydrocyanic acid sat'd. | S                | S                 |
| Carbonic acid                     | S                | S                 | Hydrofluoric acid 40%   | S                | S                 |
| Carnauba wax                      | S                | S                 | Hydrofluoric acid 60%   | S                | S                 |
| Carrot juice                      | S                | S                 | Hydrofluoric acid 75%   | S                | S                 |
| Hydrogen 100%                     | S                | S                 | Silver                  | S                | S                 |
| Hydrogen bromide 10%              | S                | S                 | Tin                     | S                | S                 |
| Hydrogen chloride gas dry         | S                | S                 | Zinc                    | S                | S                 |

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| Hydrogen peroxide 30%        | S                | S                 | Potassium bicarbonate sat'd.  | S                | S                 |
| Hydrogen peroxide 90%        | S                | O                 | Potassium borate 1%           | S                | S                 |
| Hydroquinone                 | S                | S                 | Potassium bromate 10%         | S                | S                 |
| Hydrogen sulfide             | S                | S                 | Potassium bromide sat'd.      | S                | S                 |
| Hypochlorous acid conc.      | S                | S                 | Potassium carbonate           | S                | S                 |
| Inks                         | S                | S                 | Potassium chlorate sat'd.     | S                | S                 |
| Iodine crystals              | O                | O                 | Potassium chloride sat'd.     | S                | S                 |
| Isobutyl alcohol             | S                | S                 | Potassium cyanide sat'd.      | S                | S                 |
| Isopropyl alcohol            | S                | S                 | Potassium dichromate 40%      | S                | S                 |
| Isopropyl ether              | O                | U                 | Potassium ferri/ferro cyanide | S                | S                 |
| Kerosene                     | O                | O                 | Potassium nitrate sat'd.      | S                | S                 |
| Lactic acid 10%              | S                | S                 | Potassium perborate sat'd.    | S                | S                 |
| Lactic acid 90%              | S                | S                 | Potassium perchlorate 10%     | S                | S                 |
| Lanolin                      | S                | S                 | Potassium permanganate 20%    | S                | S                 |
| Lard                         | S                | S                 | Potassium sulfate conc.       | S                | S                 |
| Lead acetate sat'd.          | S                | S                 | Potassium sulfide conc.       | S                | S                 |
| Lead nitrate                 | S                | S                 | Potassium sulfite conc.       | S                | S                 |
| Lemon juice                  | S                | S                 | Potassium persulfate sat'd.   | S                | S                 |
| Lemon oil                    | O                | U                 | Propane gas                   | S                | S                 |
| Lime juice                   | S                | S                 | Propargyl alcohol             | S                | S                 |
| Linseed oil                  | S                | S                 | Propyl alcohol                | S                | S                 |
| Magnesium sulfate sat'd.     | S                | S                 | Propylene glycol              | S                | S                 |
| Margarine                    | S                | S                 | Pyridine                      | S                | O                 |
| Magnesium carbonate sat'd.   | S                | S                 | Rayon coagulating bath        | S                | S                 |
| Magnesium chloride saturated | S                | S                 | Resorcinol                    | S                | S                 |
| Magnesium hydroxide sat'd.   | S                | S                 | Salicytic acid                | S                | S                 |
| Magnesium nitrate sat'd.     | S                | S                 | Sea water                     | S                | S                 |
| Mercuric chloride            | S                | S                 | Shortening                    | S                | S                 |
| Mercuric cyanide sat'd.      | S                | S                 | Silicic acid                  | S                | S                 |
| Mercurous nitrate sat'd.     | S                | S                 | Silver nitrate sol'n.         | S                | S                 |
| Mercury                      | S                | S                 | Soap solution conc.           | S                | S                 |
| Methyl alcohol 100%          | S                | S                 | Sodium acetate sat'd.         | S                | S                 |
| Methyl ethyl ketone 100%     | U                | U                 | Sodium benzoate 35%           | S                | S                 |

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|-------------------------|------------------|-------------------|---------------------------------|------------------|-------------------|
| Methylsulfuric acid     | S                | S                 | Sodium bicarbonate sat'd.       | S                | S                 |
| Methylene chloride 100% | U                | U                 | Sodium bisulfate sat'd.         | S                | S                 |
| Milk                    | S                | S                 | Sodium bisulfite sat'd.         | S                | S                 |
| Mineral oils            | S                | U                 | Sodium borate                   | S                | S                 |
| Molasses                | S                | S                 | Sodium carbonate conc.          | S                | S                 |
| Mustard (prepared)      | S                | S                 | Sodium chlorate sat'd.          | S                | S                 |
| Naphtha                 | O                | U                 | Sodium chloride sat'd.          | S                | S                 |
| Napthalene              | S                | U                 | Sodium cyanide                  | S                | S                 |
| Natural gas (wet)       | S                | S                 | Sodium dichromate sat'd.        | S                | S                 |
| Nickel chloride sat'd.  | S                | S                 | Sodium ferricyanide sat'd.      | S                | S                 |
| Nickel nitrate conc.    | S                | S                 | Sodium ferricyanide             | S                | S                 |
| Nickel sulfate          | S                | S                 | Sodium fluoride sat'd.          | S                | S                 |
| Nicotinic acid          | S                | S                 | Sodium hydroxide conc.          | S                | S                 |
| Nitric acid 0-30%       | S                | S                 | Sodium hypochlorite             | S                | S                 |
| Nitric acid 30-50%      | S                | O                 | Sodium nitrate                  | S                | S                 |
| Nitric acid 70%         | S                | O                 | Sodium nitrite                  | S                | S                 |
| Nitric acid 85-90%      | U                | U                 | Sodium perborate                | S                | S                 |
| Nitrobenzene 100%       | U                | U                 | Sodium phosphate                | S                | S                 |
| Nitroglycerine          | O                | U                 | Sodium sulfide 25% to saturated | S                | S                 |
| Octane                  | S                | S                 | Sodium sulfite sat'd            | S                | S                 |
| Oleura conc.            | U                | U                 | Sodium thlosulphate             | S                | S                 |
| Olive oil               | S                | S                 | Soybean oil                     | S                | S                 |
| Orange juice            | S                | S                 | Stannous chloride sat'd.        | S                | S                 |
| Ozalic acid dilute      | S                | S                 | Stannic chloride sat'd.         | S                | S                 |
| Ozalic acid saturated   | S                | S                 | Starch solution sat'd.          | S                | S                 |
| Ozone                   | O                | O                 | Stearic acid 100%               | S                | S                 |
| Palm oil                | S                | S                 | Sulfuric acid 0-50%             | S                | S                 |
| Paraffin oil            | S                | O                 | Sulfuric acid 70%               | S                | O                 |
| Peanut butter           | S                | S                 | Sulfuric acid 80%               | S                | U                 |
| Perchloroethylene       | U                | U                 | Sulfuric acid 96%               | O                | U                 |
| Pepper (fresh ground)   | S                | S                 | Sulfuric acid 96% conc.         | O                | U                 |
| Peppermint oil          | O                | U                 | Sulfuric acid fuming            | U                | U                 |
| Perchloric acid 50%     | S                | O                 | Sulfurous acid                  | S                | S                 |

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|----------------------------------|------------------|-------------------|----------------------------|------------------|-------------------|
| Petroleum ether                  | U                | U                 | Tartaric acid              | S                | S                 |
| Petroleum jelly                  | S                | S                 | Tannic acid 10%            | S                | S                 |
| Phenol                           | S                | S                 | Tea                        | S                | S                 |
| Phosphoric acid 0-30%            | S                | S                 | Tetrahydrofuran            | O                | O                 |
| Phosphoric acid 30-90%           | S                | S                 | Toluene                    | U                | U                 |
| Phosphoric acid over 90%         | S                | S                 | Tomato juice               | S                | S                 |
| Photographic solutions           | S                | S                 | Transformer oil            | S                | O                 |
| Phthalic anhydride               | S                | S                 | Trisodium phosphate sat'd. | S                | S                 |
| Pickling baths (listed below)    | -                | -                 | Trichloroethylene          | U                | U                 |
| Sulfuric acid                    | S                | S                 | Turpentine                 | O                | U                 |
| Hydrochloric acid                | S                | S                 | Urea                       | S                | S                 |
| Sulfuric-nitric                  | S                | U                 | Urine                      | S                | S                 |
| Pine oil                         | O                | U                 | Vanilla extract            | S                | S                 |
| Plating solutions (listed below) | -                | -                 | Vaseline                   | S                | S                 |
| Brass                            | S                | S                 | Vinegar com.               | S                | S                 |
| Cadmium                          | S                | S                 | Wetting agents             | S                | S                 |
| Chromium                         | S                | S                 | Whiskey                    | S                | S                 |
| Copper                           | S                | S                 | Wines                      | S                | S                 |
| Gold                             | S                | S                 | Xylene                     | U                | U                 |
| Indium                           | S                | S                 | Yeast                      | S                | S                 |
| Lead                             | S                | S                 | Zinc chloride sat'd.       | S                | S                 |
| Nickel                           | S                | S                 | Zinc oxide                 | S                | S                 |
| Rhodium                          | S                | S                 | Zinc sulfate sat'd.        | S                | S                 |

**NOTE:** The above information concerns general chemical resistance only. Since other factors such as permeation, ESCR, and container design are involved, full compatibility testing is recommended.