

GUIDE TO THE CORROSION RESISTANCE OF HIGH PHOSPHOROUS ELECTROLESS NICKEL

| Environment | Concentration % wt | Temp C | Corrosion Resistance |
|------------------------------|-----------------------|---------|-------------------------|
| Acetic Acid | | 0 - 25 | |
| Acetone | | 130 | A |
| Aluminium Chloride | 100 | Ambient | D |
| Aluminium Sulphate (Alum) | Sat | Ambient | B |
| Ammonium Chloride | Sat | Ambient | B |
| Ammonium Hydroxide | Sat | Ambient | C |
| Ammonium Nitrate | 5-28 | Ambient | B |
| Ammonium Phosphate | Sat | Ambient | B |
| Ammonium Sulphate | Sat | Ambient | A |
| Anyl Alcohol | Sat | Ambient | A |
| Anyl Chloride | 100 | Ambient | A |
| Atmosphere, Industrial | 100 | Ambient | A |
| Atmosphere, Marine | | Ambient | A |
| Atmosphere, Rural | | Ambient | A |
| Barium Chloride | | Ambient | A |
| Barium Hydroxide | 2 - 40 | 140 | A |
| Beer | 2 - 50 | Chilled | A |
| Beet Sugar Liquor | Product | Ambient | A |
| Benzene | 2 - 40 | Ambient | A |
| Benezoic Acid | 100 | Ambient | D |
| Benzyl Alcohol | Sat | Ambient | A |
| Borax | 100 | Ambient | B |
| Boric Acid | Sat | Ambient | C |
| Bromine, Dry | Sat | Ambient | A |
| Bromine, Wet | 100 | Ambient | B |
| Butadiene | 100 | 80 | A |
| Butane | 100 | 80 | A |
| Butyl Alcohol | 100 | Ambient | A |
| Brine, Oil Field | 100 | Ambient | A |

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| Calcium Chloride | Sat | Ambient | A |
| Calcium Nitrate | Sat | Ambient | A |
| Calcium Hydroxide | Sat | 140 | A |
| Cane Sugar Liquor | 100 | 200 | A |
| Caprolactam | Product | 180 | A |
| Carbon Black | 20 | Ambient | A |
| Carbon Doixide, Dry | 100 | 750 | A |
| Carbon Dioxide, Wet | 100 | Ambient | B |
| Carbon Disulphide | 100 | Ambient | A |
| Carbon Tetrachloride | 100 | Boiling | A |
| Chlorine, Dry | 100 | Ambient | A |
| Chlorine, Wet | 100 | Ambient | B |
| Chlorobenzene | 100 | Ambient | A |
| Chloroform | 100 | Ambient | A |
| Chloroform | 100 | Boiling | B |
| Chromic Acid | 2-100 | Ambient | D |
| Citric Acid | 5 | Ambient | A |
| Coffee | | Boiling | A |
| Corn Syrup Liquor | Product | Ambient | B |
| Copper Chloride | Sat | Ambient | D |
| Copper Nitrate | Sat | Ambient | D |
| Copper Sulphate | 2-30 | Ambient | C |
| Cresylic Acid | Sat | Ambient | A |
| Crude Oil | 100 | Ambient | A |
| Detergent | Sat | Ambient | A |
| Dichloroethene | 100 | Ambient | A |
| Ethyl Alcohol | 100 | Ambient | A |
| Ethylene | 100 | Ambient | A |
| Ethylene Dichloride | 100 | Boiling | A |
| Ethylene Glycol | 100 | Ambient | A |

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| Fatty Acids | 100 | Ambient | |
| Ferric Chloride | SAT | Ambient | |
| Ferric Nitrate | SAT | Ambient | |
| Ferric Sulphate | SAT | Ambient | |
| Flue Gas, Oxidising | | 1000 | |
| Flue Gas, Reducing | | 500 | |
| Fluoboric Acid | 25 | Ambient | |
| Formaldehyde | 37 | Ambient | |
| Formic Acid | 88 | Ambient | |
| Fruit Juices | PRODUCT | Ambient | |
| Fuel Oil | 100 | Ambient | |
| Gasoline | 100 | Ambient | |
| Glucose | SAT | Ambient | |
| Glycerine | 100 | Ambient | |
| Hydrochloric Acid | CONCENTRATION DEPENDENT | Ambient | |
| Hydrofluoric Acid | 2 - 100 | Ambient | |
| Hydrogen Chloride, Dry | 100 | Ambient | |
| Hydrogen Sulphide, Dry | 100 | Ambient | |
| Hydrogen Sulphide, Wet | 100 | Ambient | |
| Jet Fuel | 100 | Ambient | |
| Kerosene | 100 | Ambient | |
| Lactic Acid | 10 - 50 | Ambient | |
| Lactic Acid | 85 | Ambient | |
| Lead Acetate | SAT | Ambient | |
| Lead Nitrate | SAT | Ambient | |
| Lemon Juice | PRODUCT | Ambient | |
| Linseed Oil | 100 | Ambient | |
| Lithium Chloride | SAT | Ambient | |

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| Magnesium Chloride | | Ambient | A |
| Magnesium Hydroxide | 2 – 50 | Ambient | A |
| Maleic Acid | 2 - 100 | Ambient | A |
| Malic Acid | Sat | Ambient | A |
| Mercuric Chloride | Sat | Ambient | D |
| Methyl Alcohol | Sat | Ambient | A |
| Methyl Chloride | 100 | Ambient | C |
| Methyl Ethyl Ketone | 100 | Ambient | A |
| Milk | 100 | Ambient | A |
| Mine Water, Acid | | Ambient | B |
| Molasses, Raw | | Ambient | A |
| Molasses, Raw | | 220 | B |
| Naphtha | | Ambient | A |
| Naphtheric Acid | 100 | Ambient | B |
| Nickel Chloride | 100 | Ambient | C |
| Nickel Sulphate | Sat | Ambient | C |
| Nitric Acid | Sat | Ambient | D |
| | 2 - 100 | | |
| Oil, Petroleum | | Ambient | A |
| Oil, Mineral | 100 | Ambient | A |
| Oil, Palm | 100 | Ambient | A |
| Oil, Peanut | 100 | Ambient | A |
| Oil, Vegetable | 100 | Ambient | A |
| Oleic Acid | 100 | Ambient | A |
| Oleum | 100 | Ambient | D |
| Orange Juice | 20 | Ambient | A |
| Oxalic Acid | | Ambient | A |
| | Sat | | |
| Palmitic Acid | | Ambient | C |
| Paraffin | 100 | Ambient | A |
| Perchloroethylene | 100 | Ambient | A |
| Phenol | 100 | 200 | A |
| Phosphoric Acid | 100 | | |
| | CONCENTRATION DEPENDENT | | |
| Picric Acid | | Ambient | D |
| Polymers | 100 | 60 - 400 | A |
| Potassium Carbonate | 100 | Ambient | A |
| | Sat | | |

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| Potassium Chloride | Sat | Ambient | A |
| Potassium Ferricyanate | Sat | Ambient | B |
| Potassium Hydroxide | 2 - 50 | Ambient | A |
| Propane | 100 | Ambient | A |
| Resins | 100 | 120 | A |
| Rosin | 100 | Boiling | A |
| Soap Wash Liquor | Product | 200 | A |
| Sodium Bicarbonate | Sat | Ambient | B |
| Sodium Carbonate | Sat | Ambient | A |
| Sodium Chloride | Sat | Ambient | A |
| Sodium Cyanide | 5 | Ambient | B |
| Sodium Hydroxide | 2 - 73 | 140 - 250 | A |
| Sodium Nitrate | 10 | Ambient | A |
| Sodium Phosphate | Sat | Ambient | A |
| Sodium Sulphate | Sat | Ambient | A |
| Sodium Sulphide | Sat | Ambient | A |
| Steam | | 800 | A |
| Steam Condensate | | 180 | A |
| Stearic Acid | Sat | Ambient | A |
| Sugar Liquor | Product | Ambient | A |
| Sulphuric Acid | CONCENTRATION DEPENDENT | | |
| Sulphurous Acid | 2 - 60 | Ambient | D |
| Tall Oil | 100 | Ambient | A |
| Tanning Solution | 100 | Ambient | A |
| Toluene | 100 | 200 | A |
| Trichloroethylene | 100 | 200 | A |
| Turpentine | 100 | Ambient | A |
| Urea | Sat | Ambient | A |
| Varnish | 100 | Ambient | A |
| Vinegar | 100 | Ambient | B |
| Vinyl Chloride | 100 | 100 | A |

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| Water, Boiler Feed | | 400 | A |
| Water, Cooling | | 100 | A |
| Water, Deionized | | 180 | A |
| Water, Distilled | | Ambient | A |
| Water, Fresh | | Ambient | A |
| Water, Acid Mine | | Ambient | C |
| Water, Sea | | Ambient | A |
| Wine | 100 | Ambient | A |
| Whiskey | Product | Ambient | A |
| Xylene | 100 | Ambient | A |
| Zinc Chloride | Sat | Ambient | B |
| Zinc Nitrate | Sat | Ambient | B |