



Chemical Resistance Chart



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CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | SEALS | | |
|-------------------------------|-------------|---------------|--------------------------------|----------|------|--------------------|------|--------------|-------|--------|------------|------|---------|---------------------|---------------------|----------|-------------|--------|---------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON | CERAMIC |
| Acetaldehyde | CH3CHO | - | - | X | X | 120 | X | C | A | 350 | A | B | X | A | A | A | A | A | A |
| Acetaldehyde, Aqueous | - | 40 | - | X | X | 120 | X | X | - | 350 | X | 200 | X | A | A | A | A | A | A |
| Acetamide | CH3CONH2 | - | - | - | - | 73 | - | B | - | A | 200 | A | - | A | B | - | - | - | A |
| Acetate Solvents | - | - | - | B | B | X | - | B | - | 350 | X | - | X | A | B | - | - | - | A |
| Acetic Acid* | CH3COOH | 10 | - | B | B | 140 | 200 | X | A | 350 | 180 | - | X | A | - | A | A | A | A |
| Acetic Acid* | CH3COOH | 30 | - | B | B | 140 | 200 | X | A | 350 | 180 | - | X | A | - | A | A | A | A |
| Acetic Acid* | CH3COOH | 50 | - | 140 | 140 | 140 | 200 | X | - | 350 | 180 | - | X | A | - | A | A | A | A |
| Acetic Acid* | CH3COOH | 80 | - | X | X | 73 | 140 | X | - | 350 | 180 | - | X | A | - | A | A | A | A |
| Acetic Acid*, Glacial | CH3COOH | 100 | 1.05 | X | X | B | A | B | A | 350 | X | B | - | A | B | A | A | A | A |
| Acetone | CH3COCH3 | 100 | 0.8 | X | X | 73 | X | X | A | 350 | X | A | X | A | A | A | A | A | A |
| Acetonitrile | CH3CN | - | - | X | X | 73 | 100 | - | X | 350 | X | - | X | A | A | - | B | - | - |
| Acetyl Chloride | CH3COCL | - | - | X | X | B | 130 | - | A | 200 | X | X | X | A | C | - | - | - | - |
| Acetylene | HCCH | - | - | X | X | 73 | 250 | - | - | 250 | 200 | 200 | X | A | A | - | A | A | A |
| Acrylonitrile | H2CCHCN | - | - | X | X | 73 | 100 | - | - | 350 | X | X | 140 | C | A | - | B | A | A |
| Adipic Acid Aqueous | - | - | - | 140 | 180 | 180 | 250 | 140 | - | 350 | 250 | 200 | - | A | B | - | B | - | - |
| Alcohol, Allyl | - | - | - | X | X | 100 | 130 | X | - | 250 | 200 | 70 | 200 | A | A | A | A | A | - |
| Alcohol, Amyl | C5H11OH | - | - | 100 | 100 | 170 | 250 | 140 | - | 400 | 190 | 200 | 200 | A | A | A | A | A | - |
| Alcohol, Benzyl | C6H5CH2OH | - | - | X | X | 140 | 180 | - | - | A | 140 | B | 140 | A | A | A | A | A | - |
| Alcohol, Butyl | - | - | - | 140 | 180 | 180 | 240 | 140 | - | 250 | 100 | 180 | 140 | A | A | B | A | A | - |
| Alcohol, Ethyl | C2H5OH | - | - | 140 | 140 | 180 | 750 | - | - | 300 | 170 | B | 200 | A | A | A | A | A | A |
| Alcohol, Hexyl | - | - | - | 100 | 100 | 70 | - | - | - | A | 160 | A | 70 | A | A | A | A | A | A |
| Alcohol, Isobutyl | - | - | - | - | - | - | 250 | - | - | 300 | 140 | 140 | 70 | A | A | A | A | A | A |
| Alcohol, Isopropyl | (CH3)2CHOH | - | - | 140 | 140 | 150 | 230 | - | - | 300 | 200 | 140 | 200 | A | A | A | - | A | A |
| Alcohol, Methyl | CH3OH | 100 | 0.8 | 140 | 140 | 150 | 230 | - | - | 300 | 100 | 100 | 140 | A | A | A | A | A | A |
| Alkanes | - | - | - | 140 | 180 | 100 | 250 | - | - | 300 | 210 | X | X | A | A | - | - | - | - |
| Aluminum, Acetate | - | - | - | 100 | 100 | 100 | 250 | - | - | A | - | - | - | - | - | - | - | - | - |
| Aluminum, Chloride | ALCL3 | SAT | 2.44 | 140 | 170 | 170 | 140 | 140 | A | 210 | 180 | 210 | 200 | C | - | - | - | - | A |
| Aluminum, Fluoride | ALF3 | SAT | 2.88 | A | A | A | A | B | - | A | 180 | - | X | C | D | D | B | A | - |
| Aluminum, Formate | AL(HCOO)3 | - | - | 140 | 180 | 180 | 250 | - | - | A | 250 | 210 | 200 | - | B | - | - | - | - |
| Aluminum, Hydroxide | AL(OH)3 | - | - | 140 | 180 | 180 | 250 | - | - | A | 180 | - | 240 | A | A | - | - | - | - |
| Aluminum, Nitrate | AL(NO3)3 | - | - | 140 | 180 | 180 | 200 | 140 | - | A | 200 | 200 | 240 | - | - | - | - | - | A |
| Aluminum, Potassium Sulfate | - | - | - | 140 | 140 | 180 | 280 | B | - | A | A | 200 | 80 | A | D | - | B | A | A |
| Aluminum, Sulfate | AL2(SO4)3 | 100 | 2.7 | B | B | 180 | 280 | B | A | 250 | A | 210 | 200 | C | C | A | A | A | A |
| Amines | - | - | 10 | - | C | C | - | - | - | A | D | B | D | A | A | B | A | A | A |
| Ammonia | NH3 | 15 | - | 140 | 180 | 180 | 210 | - | A | 250 | 70 | - | X | A | - | A | A | - | A |
| Ammonia | NH3 | 25 | - | 140 | 180 | 180 | 210 | - | A | 250 | 70 | - | X | A | - | A | A | - | A |
| Ammonia | NH3 | 99 | - | X | X | 100 | 180 | - | - | 250 | X | 120 | X | A | - | B | A | - | A |
| Ammonia, Anhydrous | - | - | - | A | A | A | A | B | A | X | A | X | A | B | B | A | C | A | A |
| Ammonium, Acetate | - | - | - | 140 | 180 | 180 | A | - | - | 350 | X | 140 | - | - | B | - | - | - | - |
| Ammonium, Bifluoride | NH4HF4 | - | - | 140 | 180 | 180 | 250 | - | - | 300 | 140 | - | - | A | C | - | B | - | A |
| Ammonium, Bisulfide | NH4HS | - | - | 140 | 180 | - | 250 | - | - | 300 | - | - | - | - | - | - | - | - | - |
| Ammonium, Carbonate | NH4HCO3 | SAT | - | 140 | 180 | 200 | 250 | 140 | - | 250 | B | A | X | A | A | B | A | A | A |
| Ammonium, Chloride | NH4CL | SAT | 1.5 | 140 | 180 | 180 | 250 | 140 | A | 250 | 220 | A | X | C | B | A | A | A | A |
| Ammonium, Dichromate | (NH4)2Cr2O7 | - | - | 73 | - | - | 250 | - | - | A | 70 | 100 | X | - | - | - | - | - | - |
| Ammonium, Fluoride | NH4F | 10 | 1.15 | 100 | 100 | 180 | 250 | - | C | A | 140 | C | X | C | X | B | A | A | A |
| Ammonium, Fluoride | NH4F | 20 | 1.3 | 100 | 100 | 180 | 250 | - | C | B | 140 | C | X | C | X | B | A | A | A |
| Ammonium, Hydroxide | NH4OH | 10 | - | 140 | 170 | 180 | 250 | B | A | 250 | 180 | 200 | 200 | A | A | A | A | A | A |
| Ammonium, Metaphosphate | - | - | - | 140 | 180 | - | A | 140 | - | A | 180 | - | - | - | - | - | - | - | - |
| Ammonium, Nitrate | NH4NO3 | SAT | 1.7 | 140 | 180 | 180 | 250 | 140 | A | 250 | 180 | A | X | A | A | A | A | A | A |
| Ammonium, Oxalate | (NH4)2C2O4 | - | - | - | - | - | A | 140 | - | A | - | - | 140 | A | A | - | A | A | - |
| Ammonium, Persulfate | (NH4)2S2O8 | SAT | 2.0 | 140 | 150 | X | A | 140 | - | A | X | A | X | A | A | A | A | A | A |
| Ammonium, Phosphate | NH4H2PO4 | - | - | 140 | 180 | 180 | 250 | 140 | - | 250 | 180 | A | X | A | A | A | A | A | A |
| Ammonium, Phosphate Dibasic | (NH4)2HPO4 | - | - | 140 | 180 | 180 | 250 | 140 | - | 300 | 180 | 210 | 140 | A | A | A | A | A | A |
| Ammonium, Phosphate Monobasic | NH4H2PO4 | - | - | 140 | 180 | 180 | 250 | 140 | - | A | 190 | 210 | 140 | A | A | A | A | A | A |
| Ammonium, Phosphate Tribasic | - | - | - | 140 | 180 | 180 | 250 | 140 | - | A | 190 | 210 | 140 | A | A | A | A | A | A |
| Ammonium, Salts | - | - | 1.8 | 140 | 180 | 180 | 250 | 140 | - | 350 | 180 | 210 | 200 | - | B | - | - | - | A |
| Ammonium, Sulfate | (NH4)2SO4 | SAT | 1.8 | 140 | 180 | 180 | 250 | 140 | A | A | 180 | 210 | 200 | B | B | A | A | A | A |
| Ammonium, Sulfide | (NH4)2S | 100 | - | 68 | 68 | - | 250 | 140 | - | A | - | 210 | - | - | B | - | - | - | - |
| Ammonium, Thiocyanate | NH4SCN | SAT | 1.3 | 140 | 140 | A | 280 | 140 | - | A | A | - | 70 | - | A | - | A | - | A |
| Ammonium, Thiosulfate | (NH4)2S2O3 | SAT | 0.86 | 140 | 140 | - | 250 | 140 | - | A | - | - | - | A | A | A | - | A | A |

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|-----------------------------|----------------|---------------|--------------------------------|----------|------|--------------------|------|--------------|-------|--------|------------|------|--------|---------------------|---------------------|----------|-------------|--------|---------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON | CERAMIC |
| Amyl, Acetate | CH3COOC5H11 | 100 | 0.86 | X | X | X | 100 | X | A | A | X | 70 | X | A | A | A | A | A | A |
| Amyl, Chloride | - | 100 | 0.8 | X | X | X | 200 | X | - | A | 68 | X | X | B | C | A | A | A | A |
| Aniline | C6H5NH2 | 100 | 1.02 | X | X | 100 | 140 | X | A | A | X | 70 | X | A | A | C | B | A | A |
| Anti-Freeze | - | - | - | 140 | 180 | 180 | 180 | - | - | A | 250 | 210 | 200 | A | A | - | A | A | A |
| Antimony Chloride | - | - | 3.1 | 140 | A | 180 | 100 | 140 | - | A | 190 | 140 | 140 | X | X | - | A | - | A |
| Antimony Trichloride | SbCl3 | - | - | 140 | A | 180 | 100 | 140 | - | A | 190 | 140 | 140 | X | X | - | A | - | A |
| Aqua Regia | 80%HCL/20%HNO3 | - | - | X | X | X | 73 | X | X | A | B | X | X | X | X | A | D | - | D |
| Aromatic Hydrocarbons | - | - | - | X | X | 68 | 73 | - | - | A | 180 | X | - | A | - | - | - | A | - |
| Arsenic Acid | H3AsO4 | - | - | 100 | 140 | 140 | 210 | 140 | - | A | 210 | 150 | 200 | A | A | - | A | A | - |
| Barium Carbonate | BaCO3 | SAT | 4.3 | 140 | 180 | 180 | 250 | 140 | - | A | 250 | 250 | 200 | A | A | A | A | A | A |
| Barium Chloride | BaCl2 | SAT | 3.1 | 140 | 180 | 180 | 250 | 140 | A | A | 300 | 250 | 200 | A | A | A | A | A | A |
| Barium Hydroxide | Ba(OH)2 | SAT | 2.2 | 140 | 180 | 180 | 250 | B | A | A | 250 | 200 | 200 | A | C | B | B | A | A |
| Barium Nitrate | Ba(NO3)2 | - | - | 140 | 180 | 180 | 250 | 140 | A | A | 300 | 200 | 200 | A | A | A | B | A | A |
| Barium Salts | - | - | - | 140 | 180 | 180 | 250 | 140 | A | A | 250 | 200 | 200 | A | A | A | B | A | A |
| Barium Sulfate | BaSO4 | SAT | 4.4 | 140 | 180 | 180 | 250 | 140 | A | 300 | 200 | 200 | 200 | A | A | A | A | A | B |
| Barium Sulfide | BaS | SAT | 4.3 | 140 | 180 | 180 | 280 | B | - | 300 | 250 | 140 | 200 | A | A | - | - | A | A |
| Beer | - | - | - | 140 | 180 | 180 | 250 | B | - | 300 | 200 | 200 | 200 | A | A | A | A | A | A |
| Beer Sugar Liquors | - | - | 1.05 | 100 | 150 | 180 | 230 | - | - | A | 180 | A | 80 | A | A | - | - | A | A |
| Benzaldehyde | C6H5CHO | 100 | - | X | X | X | 73 | X | A | 100 | X | A | X | A | A | A | A | A | A |
| Benzene | C6H6 | - | - | X | X | X | 100 | X | X | 210 | 140 | X | X | B | A | A | B | A | A |
| Benzoic Acid | C6H5COOH | - | - | 140 | 140 | X | 230 | B | 140 | A | 180 | - | - | A | A | A | A | A | B |
| Benzyl Benzoate | - | - | - | - | - | - | - | - | - | A | 100 | X | X | - | B | - | B | - | - |
| Benzyl Chloride | C6H5CH2CL | 100 | 1.1 | - | - | 73 | 250 | - | - | 300 | 200 | X | X | - | - | - | - | - | - |
| Bismuth Carbonate | (BiO)2CO3 | SAT | 6.8 | 140 | 180 | 180 | 250 | - | - | 300 | 180 | - | - | - | - | - | - | - | - |
| Bleach | - | - | - | 140 | 150 | 150 | 250 | 140 | - | A | 190 | 140 | 80 | - | A | - | A | - | - |
| Borax | Na2B4O7 | - | 1.4 | 140 | 180 | 180 | 250 | 140 | A | A | 180 | A | 200 | A | A | A | A | A | A |
| Boric Acid | H3BO3 | - | - | 140 | 190 | 180 | 250 | 140 | - | A | 200 | 210 | 200 | A | A | A | A | A | A |
| Brine | - | - | - | 140 | 190 | 180 | 280 | 140 | A | A | 300 | 250 | 180 | A | A | A | A | A | A |
| Bromic Acid | HBrO3 | - | - | 140 | 190 | X | 200 | - | - | 180 | 70 | 70 | - | - | - | - | - | - | - |
| Bromine Liquid | - | - | - | X | X | X | 200 | X | X | A | 190 | X | X | X | X | A | A | X | A |
| Bromine Water | - | - | - | X | X | X | - | X | X | A | 100 | X | X | X | X | A | A | - | - |
| Bromotoluene | C6H5CH2Br | - | - | X | X | X | 180 | - | - | A | - | - | - | - | - | - | - | - | - |
| Butane | C4H10 | - | - | 140 | 180 | 180 | 250 | X | A | 250 | 180 | X | 100 | A | A | - | B | A | A |
| Butyl Acetate | - | - | 0.9 | - | - | C | C | C | A | A | C | - | C | A | - | - | A | A | A |
| Butyl Alcohol | - | - | - | - | - | - | A | - | A | A | B | - | A | A | - | - | A | A | A |
| Butyl Ether | C4H9OC4H9 | - | - | X | X | X | 100 | - | A | 140 | X | X | - | - | - | - | - | - | - |
| Butyl Phthalate | - | - | - | X | X | 120 | 100 | - | - | 200 | X | - | X | - | - | - | - | - | - |
| Butyl Stearate | - | - | - | - | - | - | 250 | - | - | 250 | 190 | 100 | X | - | A | - | - | - | - |
| Butylene | - | - | - | B | B | X | 250 | - | A | 250 | 140 | X | X | A | A | - | - | A | A |
| Butyric Acid | - | - | - | B | B | 180 | 250 | X | - | A | X | X | X | A | B | A | A | A | C |
| Cadmium Cyanide | Cd(CN)2 | - | - | 140 | 180 | - | - | 140 | - | A | - | - | - | - | - | - | - | - | - |
| Calcium Bisulfide | Ca(HS)2 | - | - | 140 | 100 | 200 | 210 | B | - | 210 | 180 | X | - | B | - | A | A | A | A |
| Calcium Bisulfite | Ca(HSO3)2 | - | - | 100 | 140 | 200 | 210 | - | - | 210 | 180 | X | 100 | A | X | A | A | - | A |
| Calcium Carbonate | CaCO3 | SAT | 2.7 | 140 | 200 | 200 | 250 | B | A | 300 | 180 | 140 | 70 | A | A | A | A | A | A |
| Calcium Chlorate | Ca(CLO3)2 | SAT | 2.7 | 140 | 180 | 200 | 250 | A | - | 250 | 180 | 140 | 73 | A | A | - | B | A | - |
| Calcium Chloride | CaCL2 | 100 | 2.1 | 140 | 210 | 210 | 250 | 140 | A | 350 | 180 | 200 | 200 | A | B | A | A | A | A |
| Calcium Hydroxide | Ca(OH)2 | 100 | 2.3 | 140 | 180 | 210 | 250 | B | A | 210 | 200 | 180 | 200 | A | A | A | A | A | A |
| Calcium Hypochlorite | Ca(OCL)2 | 100 | 2.3 | 140 | 140 | 140 | 200 | B | A | 200 | 180 | 100 | 140 | C | C | A | B | A | A |
| Calcium Nitrate | Ca(NO3)2 | 100 | 1.82 | 140 | 180 | 180 | 210 | 140 | A | 210 | 210 | 180 | 100 | - | - | - | - | A | A |
| Calcium Oxide | CaO | - | - | 140 | - | - | 250 | - | - | A | - | 210 | 200 | - | A | - | - | - | - |
| Calcium Sulfate | CaSO4 | 100 | 2.9 | 140 | 140 | 180 | 210 | 140 | A | 210 | 200 | 210 | 200 | A | A | A | B | A | A |
| Calcium Sulfide | CaS | - | - | 140 | 140 | 180 | 180 | 140 | - | 210 | 200 | 150 | 200 | - | - | - | - | - | - |
| Calgon | - | - | - | - | - | - | - | 140 | A | A | A | - | A | A | A | - | - | A | A |
| Cane Sugar Liquors | - | - | - | 140 | 140 | 180 | X | - | - | 350 | 200 | 250 | 100 | A | A | - | - | A | A |
| Carbolic Acid (See Phenol) | - | 100 | 1.07 | - | - | - | 120 | 70 | - | - | 200 | 73 | X | A | A | B | A | - | - |
| Carbon Bisulfide | CS2 | - | - | X | X | X | 68 | X | - | 210 | 180 | X | X | A | A | - | A | A | A |
| Carbon Dioxide (wet or dry) | CO2 | - | - | 140 | 180 | 180 | 250 | 140 | - | 250 | 210 | 170 | 200 | A | A | A | A | A | A |
| Carbon Disulfide | CS2 | - | - | X | X | X | 68 | X | A | 210 | 180 | X | X | A | B | - | A | A | B |
| Carbon Monoxide | CS | - | - | A | A | A | A | B | - | A | 180 | A | 200 | A | A | - | - | A | A |
| Carbon Tetrachloride | CCL4 | 100 | 1.6 | X | X | X | 140 | X | C | 350 | 190 | - | X | B | C | A | A | A | A |
| Carbonic Acid | H2CO3 | - | - | 140 | 210 | 210 | 250 | 140 | - | 350 | 200 | 210 | 70 | A | A | - | A | A | A |

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|------------------------------|----------------|---------------|--------------------------------|----------|------|--------------------|-----|------|--------------|-------|------------|-------|------|---------|---------------------|---------------------|----------|-------------|--------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON |
| | | | APPROX. SP. GR. @ STATED CONC. | | | | | | | | | | | | | | | | |
| Castro Oil | - | 100 | 0.95 | 140 | 190 | 180 | 250 | X | A | 350 | 140 | 140 | 150 | A | A | - | A | A | A |
| Caustic Lime | Ca(OH)2 | - | - | 140 | 180 | 200 | 250 | - | - | 250 | 210 | 210 | 200 | - | A | - | A | A | A |
| Caustic Potash | KOH | 100 | 2.04 | 140 | 180 | 200 | 140 | - | - | 200 | X | 200 | 200 | - | A | - | - | - | - |
| Caustic Soda | NaOH | - | 2.13 | 140 | 180 | 200 | 100 | X | - | 250 | X | 200 | 140 | - | A | - | - | - | - |
| Cellosolve | - | 100 | - | 73 | 100 | 100 | 140 | - | - | 210 | X | 140 | X | A | A | - | - | - | - |
| Chloral Hydrate | CCL3CH(OH)2 | 100 | 1.9 | 140 | 200 | - | - | - | - | 200 | X | - | 70 | C | C | - | - | - | - |
| Chloric Acid | HClO3 | 20 | - | X | - | - | - | - | - | 140 | 100 | - | X | D | D | - | - | - | - |
| Chlorine Dioxide | ClO2 | 100 | - | 140 | 140 | X | 140 | - | - | 140 | X | X | - | - | - | - | - | - | - |
| Chlorine Gas, Wet | - | - | - | X | X | X | - | X | - | A | X | X | X | - | C | - | A | - | - |
| Chlorine Liquid | - | - | - | X | X | X | 200 | X | X | A | A | B | X | X | X | X | A | - | - |
| Chlorine Water | - | - | - | 140 | 180 | X | 250 | - | - | 350 | - | 73 | 73 | X | X | A | B | A | X |
| Chlorosulfonic Acid | CLSO2OH | 100 | 1.77 | X | X | X | X | X | X | 180 | X | X | X | X | X | A | A | A | A |
| Chlorox Bleach | NaOCl:H2O | - | - | 140 | 140 | 68 | 140 | 140 | - | 250 | A | B | X | A | A | - | A | A | A |
| Chrome Alum | CrK(SO4)2 | - | - | 73 | 73 | 140 | 200 | 140 | - | 210 | 210 | 140 | 200 | - | B | - | - | - | - |
| Chromic Acid | H2CrO4 | 10 | - | 140 | X | X | 250 | X | A | 250 | 180 | 73 | X | B | B | A | A | X | A |
| Chromic Acid | H2CrO4 | 20 | - | 140 | X | X | 250 | X | X | 50 | 140 | 73 | - | X | X | A | A | X | A |
| Chromic Acid | H2CrO4 | 30 | - | 73 | X | X | 200 | X | X | 250 | 300 | - | 100 | X | X | A | A | X | A |
| Chromic Acid | H2CrO4 | 50 | - | B | X | X | 140 | X | X | 200 | 300 | - | X | X | X | A | B | X | A |
| Citric Acid | C6H8O7H2O | 100 | 1.54 | 140 | 180 | 140 | 200 | X | - | 200 | 200 | 200 | 200 | A | A | A | A | A | A |
| Copper Acetate | - | - | - | 73 | 73 | 73 | 250 | - | - | 250 | X | 150 | - | - | B | - | B | - | A |
| Copper Carbonate | Cu2(OH)2CO3 | - | - | 140 | 190 | - | 250 | - | - | 350 | 190 | 210 | 200 | - | A | - | - | - | A |
| Copper Chloride | CuCl3 | SAT | 3.4 | 140 | 190 | 180 | 250 | B | - | 350 | 200 | 210 | 200 | D | D | A | A | - | A |
| Copper Cyanide | Cu(CN)2 | SAT | - | 140 | 190 | 180 | 200 | B | A | 300 | 190 | 200 | 200 | A | A | A | A | A | A |
| Copper Fluoborate | - | - | - | 100 | 100 | - | A | A | - | A | - | - | - | X | X | - | B | A | X |
| Copper Fluoride | CuF2 | SAT | 2.9 | 140 | 140 | 140 | 250 | - | - | 250 | 190 | 210 | 140 | - | - | - | - | - | A |
| Copper Nitrate | Cu(NO3)2 | SAT | 2.3 | 140 | 140 | 180 | 210 | B | - | 250 | 200 | 210 | 200 | A | A | A | A | A | A |
| Copper Salts | - | - | - | 140 | 140 | 180 | 210 | 140 | - | 210 | 210 | 200 | 200 | - | - | - | - | - | A |
| Copper Sulfate | CuSO4 | SAT | 2.3 | 140 | 180 | 180 | 210 | 140 | A | 210 | 210 | 200 | 200 | A | A | A | A | - | A |
| Copper Sulfide | CuSO4 | 5 | - | 140 | 180 | 180 | 210 | 140 | - | 210 | 210 | 200 | 200 | - | A | - | - | A | A |
| Corn Oil | - | - | - | 73 | 73 | 100 | 250 | - | - | 250 | 200 | X | 250 | - | A | - | - | - | A |
| Corn Syrup | - | - | - | 140 | 140 | 150 | 250 | - | - | 250 | 210 | 100 | 200 | - | A | - | - | - | A |
| Cottonseed Oil | - | 100 | 0.9 | 140 | 190 | 180 | 250 | X | - | 250 | 300 | X | 240 | - | A | - | - | - | A |
| Creosol | CH3C6H4OH | 100 | 1.05 | X | X | X | 180 | X | A | 210 | 100 | X | 140 | A | A | - | - | A | A |
| Creosote | - | - | - | X | X | - | - | - | - | 210 | 100 | X | X | - | - | - | - | - | - |
| Cresols | - | - | - | X | X | X | 180 | - | - | 210 | 100 | X | X | - | A | - | - | - | - |
| Cresylic Acid | - | - | - | X | X | 73 | 150 | X | - | A | 200 | X | X | A | A | A | B | A | A |
| Croton Aldehyde | CH3CHCHCHO | - | - | X | X | 73 | 180 | - | - | 210 | 100 | - | - | - | A | - | - | - | - |
| Crude Oil | - | - | - | 140 | 190 | 73 | 250 | - | - | 350 | 300 | X | - | - | A | - | - | - | - |
| Cryolite | Na3AlF6 | - | - | 140 | 100 | 180 | 250 | - | - | 300 | 200 | 100 | - | - | - | - | - | - | - |
| Cupric Flouride | CuF2 | - | - | 140 | 180 | 180 | 250 | - | - | 250 | 200 | 210 | - | - | - | - | - | - | - |
| Cupric Nitrate | Cu(NO3)2 | - | - | 140 | 200 | 150 | 250 | - | - | A | 200 | 210 | - | - | - | - | - | - | A |
| Cupric Salts | - | - | - | 140 | 200 | 150 | 250 | - | - | A | 200 | 210 | - | - | - | - | - | - | A |
| Cupric Sulfate | CuSO4 | SAT | - | 140 | 180 | 180 | 210 | - | - | 210 | 210 | 200 | 200 | - | A | - | - | - | - |
| Cyanic Acid (Isocyanic Acid) | HN=C=O | - | - | - | - | - | - | - | - | A | X | - | - | A | A | - | - | - | - |
| Cychlohexane | C6H12 | 100 | 0.8 | X | X | X | 210 | - | A | 250 | 180 | X | A | A | A | A | - | A | A |
| Cychlohexanol | C6H11OH | 100 | 0.94 | X | X | X | 210 | - | A | 210 | 180 | X | - | - | - | - | - | A | A |
| Cychlohexanone | C6H10O | 100 | 0.95 | X | X | 68 | 68 | X | A | 210 | X | X | - | A | - | - | - | A | A |
| Detergents | - | - | - | 140 | 200 | 180 | 250 | B | A | A | 210 | 200 | - | A | A | - | - | A | A |
| Developers | - | - | - | A | A | A | A | - | - | A | A | A | - | A | - | A | A | A | A |
| Diacetone Alcohol | - | - | - | X | X | 100 | 100 | - | - | 350 | X | 70 | - | - | A | - | A | - | - |
| Diazo Salts | - | - | - | 140 | 190 | 120 | 70 | 140 | - | 350 | - | - | - | - | - | - | - | - | - |
| Dibutyl Ether | - | - | - | - | - | - | 100 | - | - | 350 | X | X | X | - | - | - | - | - | - |
| Dibutyl Phthalate | C6H4(COOC4H9)2 | - | - | X | X | 73 | 100 | - | - | 350 | X | 70 | X | - | A | - | - | - | - |
| Dichlorethane | ClCH2CH2Cl | - | - | X | X | X | 210 | - | - | 250 | 150 | - | - | A | A | - | A | - | - |
| Dichlorobenzene | C6H4Cl2 | - | - | X | X | - | 180 | - | - | 250 | 150 | X | X | - | - | - | - | - | - |
| Dichloroethylene | CLHC:CHCL | 100 | 1.25 | X | X | A | 250 | - | C | 350 | 190 | X | X | - | - | - | - | A | A |
| Dichloroisopropyl (Ether) | - | - | - | X | X | X | 100 | - | - | A | - | - | - | - | - | - | - | - | - |
| Diesel Fuel | - | - | - | 72 | 72 | X | 250 | X | A | A | 190 | X | X | A | A | - | - | A | A |
| Diethanolamine | - | - | 1.1 | X | X | A | - | - | A | 100 | - | - | - | - | - | - | - | A | A |
| Diethyl Cellosolve | - | - | - | - | - | - | 280 | - | - | A | 200 | X | - | - | A | - | - | - | - |
| Diethyl Ketone | C2H2COC2H5 | - | - | X | X | - | - | - | - | A | X | - | X | - | - | - | - | - | - |

CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | | SEALS | | | | |
|------------------------------|----------------|---------------|--------------------------------|----------|------|--------------------|------|--------------|-------|--------|------------|------|---------|---------------------|---------------------|----------|-------------|--------|---------|---|---|---|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON | CERAMIC | | | |
| Diethylamine | (C2H5)2NH | - | - | X | X | 100 | 68 | C | - | 210 | X | 120 | X | A | A | - | - | A | A | | | |
| Diethylbenzene | C6H4(C2H5)2 | - | - | X | X | X | - | - | - | A | 150 | X | X | A | - | - | - | - | - | | | |
| Diethylene Glycol | - | 100 | - | 140 | 200 | 180 | 280 | B | A | 350 | 200 | A | A | A | A | A | - | A | A | | | |
| Diethylether (Ether) | (C2H5)2O | - | - | X | X | 75 | 100 | - | - | 210 | X | X | X | - | - | - | - | - | - | | | |
| Diglycolic Acid | O(CH2COOH)2 | - | - | 140 | 190 | 73 | 70 | - | - | 210 | - | - | - | A | - | - | - | - | - | | | |
| Dimethyl Phthalate | - | 100 | 1.05 | X | X | X | 60 | - | - | A | 200 | - | - | - | - | - | - | - | A | A | | |
| Dimethylbenzene | C6H4(CH3)2 | - | - | X | X | X | 140 | - | - | 250 | 100 | X | X | - | - | - | - | - | - | | | |
| Dimethylformamide | HCON(CH3)2 | 100 | 0.95 | X | X | 120 | C | - | A | A | X | X | X | A | - | - | - | - | - | | | |
| Diisocyle Phthalate | C6H4(COOC4H9)2 | 100 | - | X | X | - | - | X | A | A | - | - | X | A | - | - | - | - | A | A | | |
| Dipropylene Glycol | - | 100 | 1.25 | 140 | 180 | 120 | 280 | - | - | A | 250 | 210 | 200 | A | - | - | - | - | A | A | | |
| Disobutyl Ketone | - | - | - | X | X | - | 140 | - | - | A | X | X | - | - | - | - | - | - | - | - | | |
| Disobutylene | C8H16 | - | - | - | - | - | 180 | - | - | 250 | 140 | X | - | A | - | - | - | - | - | - | | |
| Disodium Phosphate | - | - | - | 140 | 210 | 180 | 250 | 140 | - | 350 | 80 | 210 | 140 | - | A | - | - | - | - | - | | |
| Disopropyl Ketone | - | - | - | X | X | - | 68 | - | - | 70 | X | 70 | - | - | - | - | - | - | - | - | | |
| Distilled Water | HOH | - | - | 140 | 210 | 180 | 250 | 140 | - | 350 | - | 250 | 200 | - | A | - | - | - | - | - | | |
| Dry Cleaning Solvent | - | - | - | X | X | 73 | 250 | X | - | 250 | 200 | X | X | - | A | - | - | - | - | - | | |
| Epsom Salts | MgSO4 | - | - | 140 | 200 | 180 | 280 | 140 | - | 300 | 200 | 180 | 140 | A | A | A | A | A | 140 | A | | |
| Esters | - | - | - | X | X | X | 100 | - | - | 180 | - | - | - | - | - | - | - | - | - | - | | |
| Ethane | C2H6 | - | - | - | - | X | 280 | - | - | 350 | A | X | X | A | A | - | - | - | - | A | A | |
| Ethanolamine | - | 100 | 1.02 | X | X | X | X | - | A | 100 | D | C | X | A | A | - | - | - | - | A | A | |
| Ethyl Acetate | CH3COOL2H5 | 100 | - | X | X | 100 | 100 | C | A | 210 | X | 70 | X | A | A | - | B | A | A | A | | |
| Ethyl Alcohol | C2H5OH | 96 | 0.8 | - | - | A | A | X | A | 300 | 180 | 170 | 200 | A | A | - | - | - | - | A | A | |
| Ethyl Chloride (Cloroethane) | C2H5CL | 100 | 0.92 | X | X | C | 250 | X | - | 350 | 140 | 70 | 70 | A | A | - | - | - | - | A | A | |
| Ethyl Ether | (C2H5)2O | - | - | X | X | B | 100 | X | - | 200 | C | C | X | A | A | - | - | - | - | A | A | |
| Ethylene Dichloride | CLCH2CH2CL | 100 | 1.25 | X | X | X | - | X | B | A | 150 | X | X | A | A | A | A | A | A | A | A | |
| Ethylene Glycol | CH2OHCH2OH | 100 | 1.12 | 140 | 190 | 180 | 200 | X | - | - | 300 | A | 200 | A | A | A | B | A | A | A | A | |
| Fatty Acids | - | - | - | 140 | 140 | 140 | 250 | B | A | 250 | 180 | X | 200 | A | A | A | A | A | A | A | A | |
| Ferric Chloride, Anhydrous | FeCL3 | SAT | 2.9 | 140 | 190 | 180 | 250 | 140 | - | 300 | 210 | 200 | 200 | X | X | A | B | A | A | A | A | |
| Ferric Hydroxide | Fe(OH)3 | - | - | 140 | 180 | 180 | 250 | - | - | 250 | 180 | 180 | 100 | - | - | - | - | - | - | - | - | |
| Ferric Nitrate | FeNO3 | SAT | 1.7 | 140 | 190 | 180 | 250 | 140 | A | 250 | 180 | 180 | 100 | A | A | A | A | A | A | A | A | |
| Ferric Sulfate | Fe(SO4)3 | SAT | 3.1 | 140 | 180 | 180 | 250 | 140 | C | 250 | 190 | 210 | 240 | A | C | A | A | C | A | A | A | |
| Ferrous Chloride | FeCL2 | SAT | 3.2 | 140 | 180 | 180 | 250 | 140 | A | 250 | 200 | 200 | 240 | X | X | A | B | A | A | A | A | |
| Ferrous Nitrate | - | - | - | 140 | 180 | 180 | 250 | 140 | - | 250 | 200 | 180 | 140 | A | - | A | A | A | A | A | A | |
| Ferrous Sulfate | FeSO4 | SAT | 1.9 | 140 | 190 | 180 | 280 | 140 | - | 400 | 200 | 190 | 200 | A | A | A | A | A | A | A | A | |
| Fluoboric Acid | HF4 | 48 | 1.4 | 140 | 190 | 140 | 200 | 140 | - | 250 | 200 | 160 | 100 | B | D | X | A | A | A | X | X | |
| Fluorine , Liquid | F2 | - | - | 140 | 140 | 140 | 250 | X | - | X | - | - | - | X | X | X | A | X | - | - | - | |
| Fluosilicic Acid | H2SIF6 | - | - | X | 190 | 180 | 210 | 140 | - | 250 | 200 | 140 | 240 | B | - | - | - | - | - | - | A | X |
| Formaldehyde | HCHO | 100 | 0.82 | 140 | 150 | 150 | 140 | X | A | 250 | X | 140 | 100 | A | A | A | A | - | - | - | A | X |
| Formaldehyde | HCHO | 40 | 1.01 | 140 | 100 | 73 | 140 | - | A | 250 | X | 140 | X | A | A | - | - | - | - | - | - | A |
| Formic Acid | HCOOH | 98 | 1.22 | 100 | 100 | 100 | 210 | X | A | 300 | 100 | 200 | 70 | A | A | C | A | A | A | A | A | |
| Freon 11 (MF) | CCL3F | - | - | 72 | 72 | 73 | 250 | - | A | 250 | 180 | X | 120 | A | A | - | - | - | - | - | - | A |
| Freon 113 (TF) | CL3CCF3 | - | - | C | C | D | 250 | - | A | 250 | 70 | X | - | A | A | - | - | - | - | - | - | A |
| Freon 12 (wet) | CL2CF2 | - | - | - | - | - | - | - | - | 250 | - | - | - | - | - | - | - | - | - | - | - | - |
| Fructose | C6H12O6 | - | - | 140 | 190 | 180 | 250 | 140 | - | 300 | 180 | 75 | 140 | A | A | - | - | - | - | - | - | A |
| Fruit Juice | - | - | - | 140 | 190 | 180 | 250 | 140 | A | 300 | 210 | A | 150 | A | A | - | - | - | - | - | - | A |
| Furfural (Ant Oil) Bran Oil | C4H3OCHO | SAT | 1.2 | X | X | C | B | - | A | A | X | X | X | A | A | - | - | - | - | - | - | A |
| Gallic Acid | - | - | - | 140 | 190 | 73 | 100 | X | - | 300 | 190 | 70 | - | A | A | - | - | - | - | - | - | - |
| Gasoline | - | 100 | - | C | C | X | 250 | X | A | 250 | 180 | X | 80 | A | A | X | A | A | A | A | A | A |
| Glucose | C6H12O6 | 20 | 1.54 | 140 | 190 | 180 | 280 | 140 | A | 400 | 300 | 250 | 200 | A | A | - | - | - | - | - | - | A |
| Glue | - | - | - | 140 | 190 | 120 | - | - | - | 250 | 250 | 100 | 200 | A | B | A | - | - | - | - | - | A |
| Glycerine | C3H5(OH)3 | 100 | 4.3 | 140 | 190 | 180 | 280 | - | - | 400 | 250 | 200 | 200 | A | A | A | A | A | A | A | A | A |
| Glycerol (Glycol Alcohol) | C3H5(OH)3 | 100 | 1.3 | 140 | 190 | 180 | 280 | X | - | 400 | 250 | 200 | 200 | A | A | - | - | - | - | - | - | A |
| Glycolic Acid | CH2OHC | 100 | 4.3 | 140 | 190 | 150 | B | X | A | 200 | X | - | X | - | - | - | - | - | - | - | - | A |
| Glycols | - | - | - | 140 | 190 | 120 | 250 | X | - | 300 | 250 | 200 | 200 | A | A | - | - | - | - | - | - | A |
| Heptane | CH3(CH2)5CH3 | 100 | - | 100 | 150 | 73 | 250 | D | A | 300 | 340 | X | 70 | A | A | - | - | - | - | - | - | A |
| Hexane | CH3(CH2)4CH3 | 100 | 0.66 | X | 72 | 73 | 250 | X | A | 300 | 340 | X | 70 | A | A | - | - | - | - | - | - | A |
| Hexyl Alcohol (Hexanol) | C6H11OH | - | - | 140 | 190 | 73 | 180 | - | - | 250 | 250 | - | X | - | - | - | - | - | - | - | - | - |
| Hydraulic Oil | - | - | - | - | - | X | - | - | - | 300 | 250 | X | 70 | A | A | - | - | - | - | - | - | A |
| Hydrazine | H2NNH2 | 100 | 1 | X | X | X | 200 | - | - | 250 | A | 70 | A | A | A | - | - | - | - | - | - | A |
| Hydrobromic Acid | HBr | 48 | 1.5 | 140 | 180 | 180 | 250 | 140 | - | 250 | 190 | 140 | 100 | X | X | A | A | A | A | A | B | B |
| Hydrobromic Acid | HBr | 20 | - | 140 | 180 | 180 | 250 | 140 | - | 250 | 190 | 140 | 100 | X | X | A | A | A | A | A | A | A |

CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | | SEALS | |
|----------------------------|--------------------|---------------|--------------------------------|----------|------|--------------------|-----|------|--------------|-------|------------|-------|------|---------|---------------------|---------------------|----------|-------------|--------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON |
| Hydrochloric Acid | HCL | 100 | - | A | A | - | - | - | - | A | C | X | X | X | X | C | A | A | |
| Hydrochloric Acid | HCL | 10 | 1.05 | 140 | 210 | 120 | 250 | 140 | C | 250 | 100 | 70 | C | X | X | C | B | A | |
| Hydrochloric Acid | HCL | 25 | 1.12 | 140 | 210 | 120 | 250 | 140 | X | 250 | 100 | 70 | X | X | X | C | B | A | |
| Hydrochloric Acid | HCL | 37 | 1.19 | 140 | 210 | 120 | 210 | 140 | X | 250 | 70 | X | X | X | X | C | B | A | |
| Hydrocyanic Acid | HCN | - | - | 140 | 140 | 140 | 250 | 140 | - | 250 | 190 | 200 | 70 | A | A | A | A | A | |
| Hydrofluoric Acid | HF | 20 | 1.1 | 100 | 140 | 150 | 250 | 70 | B | 300 | 150 | 100 | 150 | X | X | X | A | A | |
| Hydrofluoric Acid | HF | 40 | - | 68 | 68 | 120 | 250 | 70 | C | 300 | 200 | 70 | 140 | X | C | X | A | A | |
| Hydrofluoric Acid | HF | 70 | 1.26 | X | X | 100 | 200 | C | C | 250 | 100 | X | 100 | X | X | X | C | X | |
| Hydroflusilicic Acid | H2SiF6 | - | - | X | X | 73 | 250 | 140 | - | 300 | 200 | 140 | 150 | X | X | X | C | A | |
| Hydroflusilicic Acid | H2SiF6 | 20 | - | X | X | 73 | 250 | 140 | A | 300 | 200 | 140 | 150 | X | X | X | B | A | |
| Hydrogen Cyanide | HCN | - | - | 140 | 190 | 150 | 280 | - | - | 300 | 150 | 100 | 100 | A | A | - | - | - | |
| Hydrogen Fluoride | HF | - | - | X | X | 73 | 200 | - | - | 250 | 180 | X | - | X | X | - | - | - | |
| Hydrogen Peroxide | H2O2 | 10 | 1.05 | 140 | X | 73 | 250 | 140 | B | 250 | 180 | 100 | 200 | C | X | B | A | A | |
| Hydrogen Peroxide | H2O2 | 30 | 1.15 | 140 | X | A | 250 | 140 | C | 250 | 200 | 100 | 200 | A | X | B | A | A | |
| Hydrogen Peroxide | H2O2 | 50 | 1.25 | 68 | X | X | 250 | - | C | 250 | 100 | X | 200 | A | X | C | A | A | |
| Hydrogen Peroxide | H2O2 | SAT | 1.5 | X | X | X | 68 | - | C | 250 | 100 | X | 200 | A | X | C | A | A | |
| Hydrogen Sulfide (Aq Sol) | H2S | SAT | 1.19 | 140 | 190 | 150 | 200 | 140 | A | 250 | 140 | 100 | - | A | A | A | A | A | |
| Hydroquinone | C6H4(OH)2 | 100 | 1.3 | 140 | 190 | 150 | 250 | 140 | - | 250 | B | X | X | - | - | - | - | A | |
| Hypochlorous Acid | HOCL | - | - | 140 | 190 | 120 | 250 | 140 | - | 250 | 180 | 70 | X | - | D | - | - | - | |
| Ink | - | - | - | - | - | - | - | B | - | A | 70 | 70 | - | A | A | - | - | A | |
| Iodine Solution | I2 | 0 | - | 72 | 72 | 73 | 150 | X | - | 200 | 70 | 70 | 70 | X | X | B | D | D | |
| Isooctane | (CH3)3CCH2CH(CH3)2 | 100 | 0.7 | 72 | 72 | 73 | 250 | - | A | A | 190 | X | 200 | - | A | - | - | A | |
| Isopropyl Acetate | CH3COOCH(CH3)2 | SAT | 0.92 | X | - | - | - | - | - | 200 | X | 70 | X | B | B | - | - | A | |
| Isopropyl Alcohol | (CH3)2CHOH | 100 | 0.78 | 140 | 140 | 140 | 250 | X | A | 300 | 180 | 140 | 200 | A | A | - | - | A | |
| Isopropyl Ether | - | 100 | 0.72 | X | X | X | 130 | - | - | 140 | X | X | A | A | - | - | - | A | |
| Jet Fuel JP-3, JP4, JP5 | - | - | - | A | A | X | A | X | A | 200 | 190 | X | X | A | A | - | - | A | |
| Kerosene | - | 100 | 0.81 | 140 | 72 | X | 250 | X | A | 250 | 300 | X | X | A | A | A | A | A | |
| Ketones | - | - | - | X | X | C | A | - | B | 200 | X | X | X | A | A | A | A | A | |
| Lacquer | - | - | - | C | C | B | A | - | - | A | X | A | X | A | A | A | - | A | |
| Lacquer Thinner | - | - | - | X | X | B | - | - | - | A | - | A | X | A | A | A | - | A | |
| Lactic Acid (Milk Acid) | - | - | 1.2 | 140 | 140 | 180 | 250 | X | A | 250 | 210 | 70 | 140 | A | A | A | A | A | |
| Lead Acetate | Pb(C2H3O2)2 | - | - | 140 | 190 | 180 | 250 | 140 | A | 250 | X | 210 | 100 | A | A | A | A | A | |
| Lemon Oil | - | - | - | 72 | 72 | X | 250 | - | - | 250 | 200 | - | A | - | - | - | - | A | |
| Lime - Sulfur Solution | - | - | - | 140 | 190 | 10 | 150 | - | - | A | 190 | X | 160 | - | - | - | - | - | |
| Linseed Oil (Flaxseed Oil) | - | - | - | 140 | 190 | 150 | 250 | X | - | 300 | 250 | 70 | 200 | - | - | - | - | - | |
| Lithium Bromide | LiBr | 100 | 3.46 | 140 | 190 | - | 230 | - | - | 300 | 200 | - | 200 | - | - | - | - | - | |
| Lithium Chloride | LiCL | - | - | 140 | 190 | - | 250 | - | - | 300 | 140 | 100 | - | - | A | - | - | - | |
| Lubricants | - | - | - | A | A | A | - | - | A | A | A | - | - | A | A | A | A | A | |
| Lubricating Oil | - | - | - | 140 | 190 | 73 | 250 | - | 70 | 350 | 180 | X | X | A | A | A | A | A | |
| Machine Oil | - | - | - | 140 | 190 | 120 | 210 | - | A | 210 | 140 | - | - | A | A | A | A | A | |
| Magnesium Carbonate | MgCO3 | SAT | 3 | 140 | 180 | 180 | 210 | 140 | - | 210 | 210 | 170 | 140 | A | A | - | B | - | |
| Magnesium Chloride | MgCL2 | SAT | 2.3 | 140 | 190 | 180 | 280 | 140 | A | 400 | 180 | 180 | 200 | B | B | A | A | - | |
| Magnesium Citrate | MgHC6H5O7 | - | - | 140 | 180 | 180 | 250 | 140 | - | 300 | 210 | 180 | - | - | - | - | - | - | |
| Magnesium Hydroxide | Mg(OH)2 | SAT | 2.36 | 140 | 190 | 180 | 250 | A | A | 300 | 230 | 170 | 200 | A | A | A | A | A | |
| Magnesium Nitrate | Mg(NO2)2 | SAT | 2.03 | 140 | 190 | 180 | 250 | 140 | - | 300 | 230 | 140 | 140 | A | A | A | A | - | |
| Magnesium Sulfate | MgSO4 | SAT | 2.6 | 140 | 190 | 180 | 250 | 140 | A | 300 | 200 | 180 | 140 | A | B | A | B | A | |
| Maleic Acid | - | SAT | 1.59 | 140 | 190 | 180 | 250 | 70 | - | 250 | 200 | 70 | X | - | - | - | - | A | |
| Malic Acid (Apple) | - | SAT | 1.6 | 140 | 190 | 73 | 250 | - | X | 250 | 200 | X | 70 | A | A | A | A | D | |
| Manganese Sulfate | MnSO4 | SAT | 2.6 | 140 | 180 | 180 | 250 | B | A | 250 | 230 | 180 | 180 | A | B | A | B | A | |
| Mercuric Chloride | HgCL2 | 40 | - | 140 | 190 | 180 | 250 | - | - | 300 | 190 | 210 | 140 | X | X | A | A | A | |
| Mercuric Cyanide | Hg(CN)2 | SAT | 4 | 140 | 180 | 180 | 250 | - | - | 300 | 70 | 70 | 70 | A | A | A | - | A | |
| Mercury (Quicksilver) | Hg | 100 | 13.6 | 140 | 190 | 150 | 250 | 140 | - | 300 | 100 | 70 | 80 | A | A | C | A | A | |
| Methane (Methyl Hydride) | CH4 | - | - | 140 | 72 | 120 | 280 | - | - | 300 | 300 | X | 200 | A | A | - | - | - | |
| Methanol | - | 100 | 0.8 | 140 | 140 | 150 | 230 | - | - | 300 | 100 | 100 | 140 | A | A | A | A | A | |
| Methyl "Cellosolve" | - | - | - | X | X | 73 | 250 | - | - | A | X | 70 | 70 | - | A | - | - | - | |
| Methyl Acrylate | - | 100 | 0.92 | X | X | 68 | 100 | - | - | A | X | B | X | A | A | - | A | - | |
| Methyl Alcohol | CH3OH | 100 | 0.8 | 140 | 140 | 150 | 230 | - | - | 300 | 100 | 100 | 140 | A | A | A | A | A | |
| Methyl Chloride | CH3CL | 100 | 1.3 | X | X | X | 250 | X | - | 250 | 150 | X | X | A | X | A | A | A | |
| Methyl Chloroform | - | 100 | - | X | X | X | 120 | X | - | 200 | 80 | X | X | A | A | - | - | - | |
| Methyl Ethyl Ketone (MEK) | CH3COC2H5 | 100 | 0.82 | X | X | A | X | X | A | 200 | X | 70 | X | A | B | A | A | A | |
| Methyl Isobutyl Ketone | - | 100 | 0.8 | X | X | X | X | X | A | 210 | X | - | - | A | B | A | A | A | |

CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | | SEALS | |
|-------------------------------|--------------|---------------|--------------------------------|----------|------|--------------------|-----|------|--------------|-------|------------|-------|------|---------|---------------------|---------------------|----------|-------------|--------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON |
| Methylamine | CH3NH2 | - | - | X | X | X | X | X | X | 250 | 100 | 70 | X | A | B | - | - | A | A |
| Methylene Chloride | CH2CL2 | 100 | 1.34 | X | X | X | 100 | X | - | 250 | X | X | X | A | A | A | A | A | A |
| Methylisobutyl Carbinol | - | - | - | 72 | 72 | 120 | 150 | - | - | 200 | 70 | 70 | 70 | - | - | - | - | - | - |
| Milk | - | - | - | 140 | 190 | 180 | 280 | 140 | - | 400 | 190 | 190 | 200 | A | A | A | A | A | A |
| Mineral Oil | - | - | - | 140 | 190 | 72 | 250 | X | A | 300 | 300 | X | 70 | A | A | A | A | A | A |
| Molasses | - | - | - | 140 | 190 | 180 | 250 | 140 | A | 300 | 300 | X | 150 | A | A | - | - | A | A |
| Monoethanolamine | - | - | - | X | X | 150 | X | - | - | 100 | 190 | 70 | X | - | - | - | - | - | - |
| Motor Oil | - | - | - | 140 | 190 | X | 250 | - | A | 250 | 250 | X | - | A | A | A | A | A | A |
| Naphtha | - | - | - | 140 | A | 100 | 210 | X | A | 210 | 150 | X | X | A | A | A | A | A | A |
| Naphthalene (Tar Camphor) | C10H8 | 100 | 1.15 | X | X | B | 200 | X | A | 250 | 170 | X | X | B | B | A | A | A | A |
| Nickel Acetate | - | SAT | 1.74 | 140 | 180 | 180 | 210 | 140 | - | A | X | 70 | X | - | - | - | - | - | - |
| Nickel Chloride | NiCL2 | SAT | 3.5 | 140 | 210 | 180 | 250 | 140 | - | 250 | 210 | 210 | 200 | A | A | A | A | A | A |
| Nickel Nitrate | Ni(NO3)4 | SAT | 2.1 | 140 | 190 | 180 | 250 | 140 | - | 300 | 250 | 210 | X | A | B | B | A | A | A |
| Nickel Sulfate | NiSO4 | SAT | 3.7 | 140 | 190 | 180 | 250 | 140 | - | 300 | 180 | 210 | 200 | A | A | A | A | A | A |
| Nitric Acid | HNO3 | 10 | - | 100 | 180 | 180 | 250 | 140 | X | 250 | 190 | B | 100 | A | A | A | A | B | A |
| Nitric Acid | HNO3 | 30 | - | 73 | 100 | 180 | 210 | 70 | X | 250 | 190 | X | 73 | A | A | A | A | X | A |
| Nitric Acid | HNO3 | 50 | - | 73 | 100 | 73 | 120 | X | X | 250 | 100 | X | X | A | A | A | A | X | A |
| Nitric Acid | HNO3 | 70 | - | X | X | X | 100 | X | X | 210 | X | X | X | A | B | A | A | X | A |
| Nitric Acid | HNO3 | SAT | 1.5 | X | X | X | 73 | X | X | 73 | X | X | X | A | B | A | A | X | A |
| Nitric Acid | HNO3 | - | - | X | X | X | X | X | X | A | X | X | X | X | B | B | B | X | A |
| Nitrobenzene | C6H5NO2 | 100 | 1.2 | X | X | 73 | 140 | X | B | 250 | 70 | X | X | A | B | A | B | A | B |
| Oils, Aniline | - | - | - | X | X | 100 | 120 | - | - | 250 | X | 140 | 70 | A | A | A | D | A | A |
| Oils, Citric | - | - | - | - | - | 72 | A | - | - | 300 | 140 | - | - | A | A | - | - | A | A |
| Oils, Coconut | - | - | - | 140 | 72 | 150 | 250 | - | - | 350 | 140 | X | 140 | A | A | - | - | A | A |
| Oils, Corn | - | - | - | 68 | 68 | 100 | 250 | - | - | 250 | 140 | X | X | A | A | - | - | A | A |
| Oils, Cottonseed | - | - | - | 140 | 210 | 150 | 250 | - | A | 300 | 140 | X | 200 | A | A | - | - | A | A |
| Oils, Creosote | - | - | - | X | X | X | - | - | A | 300 | 73 | X | X | A | A | - | - | A | A |
| Oils, Fuel | - | - | - | 140 | 140 | 73 | 250 | - | A | 300 | 140 | X | - | A | A | - | - | A | A |
| Oils, Linseed | - | - | - | 140 | 180 | 180 | 250 | - | A | 300 | 220 | X | 200 | A | A | - | - | A | A |
| Oils, Mineral | - | - | - | 140 | 190 | 100 | 250 | - | - | 300 | 300 | X | 70 | A | A | - | - | A | A |
| Oils, Olive | - | - | - | 140 | 180 | 180 | 250 | - | - | 300 | 150 | - | 100 | A | A | - | - | A | A |
| Oils, Pine | - | - | - | 140 | 180 | - | - | - | - | 300 | 70 | - | - | A | A | - | - | A | A |
| Oils, Silicone | - | - | - | 140 | 190 | 150 | 250 | - | - | 350 | 190 | 140 | 140 | A | A | - | - | A | A |
| Oils, Vegetable | - | - | - | 140 | 190 | 120 | 250 | - | - | 350 | 200 | X | 70 | A | A | - | - | A | A |
| Oleic Acid (Red Oil) | - | - | 0.9 | 140 | 190 | 73 | 250 | - | - | 250 | 190 | 70 | 70 | A | A | - | A | A | A |
| Oxalic Acid | - | 50 | 1.7 | 140 | 190 | 150 | 200 | A | - | 300 | 180 | 150 | 70 | A | B | C | B | A | A |
| Paraffin | - | 100 | - | 120 | 140 | 120 | 250 | - | A | 250 | 250 | X | X | A | A | - | - | A | A |
| Pentane (Amyl Hydride) | CH3(CH2)3CH3 | 100 | - | B | B | - | - | - | A | 100 | 100 | X | 70 | X | X | - | B | A | A |
| Perchloric Acid | HCL04 | 10 | 1.8 | 140 | 140 | 100 | 250 | - | - | 250 | 70 | 70 | 70 | A | A | - | - | - | - |
| Perchloric Acid | HCL04 | 70 | - | X | X | X | 120 | 140 | - | 180 | 180 | 70 | X | - | B | - | - | - | - |
| Perchloroethylene | CL2CCCL2 | 100 | 1.6 | X | X | X | 250 | X | B | 250 | 200 | X | X | A | A | - | - | A | A |
| Petrolatum | - | - | - | 140 | 190 | 120 | 250 | X | - | 300 | 100 | X | 70 | A | A | - | - | A | A |
| Petroleum Oils | - | - | - | 140 | 200 | 73 | 250 | B | - | - | 180 | B | X | A | A | - | - | A | A |
| Phenols | C6H5OH | 100 | 1.1 | X | 72 | B | 150 | X | A | 250 | 200 | 70 | X | A | A | C | A | A | X |
| Phosphoric Acid | H3PO4 | 20 | 1.1 | 140 | 190 | 180 | 250 | 140 | A | 250 | 200 | 100 | 200 | A | A | A | A | A | A |
| Phosphoric Acid | H3PO4 | 50 | 1.4 | 140 | 190 | 180 | 250 | X | A | 250 | 200 | 70 | 200 | B | C | B | A | A | A |
| Phosphoric Acid | H3PO4 | 85 | 1.7 | 140 | 190 | 180 | 280 | X | C | 250 | 200 | 70 | 200 | B | C | B | A | A | A |
| Phosphoric Acid | H3PO4 | 100 | 1.8 | 100 | 100 | 100 | 250 | X | X | 250 | 100 | 70 | X | B | C | B | A | B | A |
| Phosphoric Acid Crude | H3PO4 | - | 1.83 | B | A | B | A | X | X | 250 | 100 | 70 | X | C | X | X | A | B | A |
| Photographic Developer | - | - | - | 140 | 190 | 150 | 250 | X | A | 250 | 190 | A | 100 | A | B | A | A | A | A |
| Photographic Solutions | - | - | - | 140 | 190 | 150 | 250 | X | A | 250 | 180 | A | 80 | A | B | A | A | A | A |
| Phthalic Acid | C6H4(COOH)2 | SAT | 1.59 | X | X | X | 200 | - | - | 250 | 140 | 100 | 140 | A | B | - | A | - | - |
| Pickle Brine | - | - | - | 140 | 180 | 140 | 250 | - | - | 300 | 70 | 100 | 200 | - | - | - | - | A | A |
| Pickling Solutions | - | - | - | 140 | 180 | 180 | 250 | X | - | 250 | - | X | X | - | - | - | - | A | A |
| Picric Acid | C6H2(NO2)3OH | SAT | 1.77 | 70 | 70 | 73 | 70 | X | - | 250 | 190 | 140 | 70 | A | A | - | A | - | - |
| Plating Solutions, Antimony * | - | - | - | 140 | 190 | 150 | 240 | - | A | 300 | 140 | - | - | A | B | A | A | A | A |
| Plating Solutions, Arsenic * | - | - | - | 140 | 190 | 150 | 240 | 140 | A | 300 | 100 | - | - | A | B | A | A | A | A |
| Plating Solutions, Brass * | - | - | - | 140 | 180 | 180 | 250 | 140 | A | 250 | 150 | 70 | 200 | A | B | A | A | A | A |
| Plating Solutions, Bronze * | - | - | - | 140 | 180 | 180 | 200 | 140 | A | 250 | 70 | 70 | - | A | B | A | A | A | A |
| Plating Solutions, Cadmium * | - | - | - | 140 | 210 | A | 240 | 140 | A | 250 | 180 | 70 | 200 | A | - | A | A | A | A |

* see back of chart for additional information

CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | | SEALS | | | | |
|------------------------------|--------------|---------------|--------------------------------|----------|------|--------------------|------|--------------|-------|--------|------------|------|---------|---------------------|---------------------|----------|-------------|--------|---------|---|---|---|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON | CERAMIC | | | |
| Plating Solutions, Chrome * | - | - | - | 140 | 180 | X | 250 | 140 | - | 250 | 250 | - | 80 | X | X | - | - | - | - | - | - | - |
| Plating Solutions, Copper * | - | - | - | 140 | 180 | 180 | 210 | 140 | A | 250 | 180 | 70 | 200 | - | - | - | - | - | - | - | A | A |
| Plating Solutions, Gold * | - | - | - | 140 | 180 | X | 250 | 140 | - | 250 | 180 | 70 | 200 | - | - | - | - | - | - | - | A | A |
| Plating Solutions, Indium * | - | - | - | 140 | 180 | 120 | 200 | 140 | A | 250 | 100 | - | - | - | - | - | - | - | - | - | - | - |
| Plating Solutions, Iron * | - | - | - | A | A | A | A | 140 | - | A | A | - | 200 | - | - | D | A | A | B | B | - | - |
| Plating Solutions, Lead * | - | - | - | 140 | 140 | 140 | 250 | 140 | A | 250 | 180 | 70 | 200 | - | - | - | - | - | - | - | A | A |
| Plating Solutions, Nickel * | - | - | - | 140 | 140 | 140 | 250 | 140 | A | 250 | 180 | 70 | 200 | A | A | A | A | A | A | A | A | A |
| Plating Solutions, Rhodium * | - | - | - | 140 | 100 | 140 | 250 | 140 | A | 250 | 180 | - | 80 | - | - | - | - | - | - | - | - | A |
| Plating Solutions, Silver * | - | - | - | 140 | 190 | 180 | 250 | 140 | A | 300 | 1880 | 70 | 200 | - | - | - | - | - | - | - | A | A |
| Plating Solutions, Tin * | - | - | - | 140 | 190 | 180 | 250 | 140 | A | 300 | 180 | 100 | 200 | - | - | - | - | - | - | - | A | A |
| Plating Solutions, Zinc * | - | - | - | 140 | 200 | 180 | 250 | 140 | A | 300 | 180 | 70 | 200 | - | - | - | - | - | - | - | A | A |
| Polyethylene Glycol | - | SAT | - | 140 | 180 | 180 | 250 | - | - | 250 | 200 | 100 | 200 | - | - | - | - | - | - | - | A | A |
| Potash | K2CO3 | - | - | 140 | 180 | 180 | 250 | B | - | 250 | 200 | - | - | A | A | A | A | A | A | A | A | A |
| Potassium Acetate | KC2H3O2 | 40 | - | - | - | 100 | 250 | - | A | 250 | C | 100 | - | - | - | - | - | - | - | - | A | A |
| Potassium Bicarbonate | KHCO3 | SAT | 2.2 | 140 | 200 | 180 | 250 | - | A | 400 | 200 | 170 | 200 | A | B | A | B | A | B | A | A | A |
| Potassium Bichromate | K2Cr2O7 | SAT | 2.7 | 140 | 180 | 180 | 250 | - | - | 300 | 250 | 170 | - | - | - | - | - | - | - | - | - | - |
| Potassium Bisulfate | KHSO4 | SAT | - | 140 | 180 | 180 | 250 | - | - | 300 | 200 | 170 | 140 | - | - | - | - | - | - | - | - | - |
| Potassium Bromate | KBrO3 | 10 | - | 140 | 180 | 180 | 250 | - | - | 250 | 220 | - | 140 | - | - | - | - | - | - | - | A | A |
| Potassium Bromide | KBr | SAT | 2.7 | 140 | 180 | 180 | 250 | B | A | 300 | 200 | 150 | 200 | A | A | A | A | A | A | A | A | A |
| Potassium Carbonate | K2CO3 | SAT | 2.4 | 140 | 180 | 180 | 250 | B | A | 300 | 200 | 160 | 200 | A | A | A | A | A | A | A | A | A |
| Potassium Chlorate | KClO3 | SAT | 2.3 | 140 | 180 | 180 | 250 | B | A | 300 | 180 | 140 | 200 | A | A | A | A | A | A | A | A | A |
| Potassium Chloride | KCl | SAT | 2 | 140 | 180 | 180 | 250 | B | A | 300 | 200 | 200 | 200 | A | A | A | A | A | A | A | A | A |
| Potassium Chromate | K2CrO4 | 40 | - | 140 | 180 | 180 | 250 | B | A | 250 | 100 | 170 | 200 | B | - | A | B | A | B | A | A | A |
| Potassium Cyanide | KCN | SAT | 1.5 | 140 | 180 | 180 | 250 | B | A | 250 | 190 | 140 | 200 | A | A | A | A | A | A | A | A | A |
| Potassium Dichromate | K2Cr2O7 | 40 | - | 140 | 180 | 180 | 250 | B | A | 250 | 180 | 170 | 200 | A | A | A | B | A | B | A | A | A |
| Potassium Ferrocyanide | K4Fe(CN)6 | SAT | 1.9 | 140 | 150 | 140 | 250 | A | - | 300 | 180 | 140 | 80 | A | A | A | A | A | A | A | A | A |
| Potassium Hydroxide | KOH | 50 | - | A | A | A | X | B | A | A | B | 200 | 140 | B | B | C | A | A | X | X | X | X |
| Potassium Hydroxide | KOH | 25 | - | 140 | 180 | 180 | 140 | B | A | 250 | B | 200 | 140 | A | A | C | A | A | X | X | X | X |
| Potassium Nitrate | KNO3 | SAT | 2.1 | 140 | 190 | 150 | 250 | B | A | 350 | 180 | 210 | 200 | A | A | A | A | A | A | A | A | A |
| Potassium Perbotate | - | SAT | - | 140 | 180 | 180 | 250 | - | - | 250 | - | - | - | - | - | - | - | - | - | - | A | A |
| Potassium Perchlorate | KClO4 | 10 | - | 140 | 180 | 180 | 250 | - | - | 200 | 150 | 140 | 150 | - | - | - | - | - | - | - | A | A |
| Potassium Permanganate | KMNO4 | 20 | - | 140 | 180 | 120 | 250 | B | A | 300 | 150 | 210 | 200 | A | A | B | B | A | B | A | A | A |
| Potassium Sulfate | K2SO4 | SAT | 2.7 | 140 | 190 | 180 | 250 | - | A | 250 | 200 | 180 | 140 | A | A | A | A | A | A | A | A | A |
| Potassium Sulfide | K2S | SAT | 1.8 | 100 | 120 | A | 250 | - | A | 300 | 100 | - | - | A | A | - | B | A | A | A | A | A |
| Propane | C3H8 | - | - | X | X | X | 250 | - | - | 300 | 300 | X | 70 | A | A | - | - | - | - | - | A | A |
| Propyl Alcohol | CH3CH2CH2OH | 100 | 0.8 | 72 | 72 | 150 | 150 | - | A | 250 | 200 | 140 | 200 | A | B | A | A | A | A | A | A | A |
| Propylene Glycol | CH3CHOHCH2OH | 100 | 1 | - | - | A | 250 | B | A | 300 | 200 | - | - | A | B | A | A | A | A | A | A | A |
| Pyridine | N(CH)4CH | 100 | 1 | X | X | 72 | X | C | B | 170 | X | 70 | X | B | C | - | - | - | - | - | A | A |
| Pyrogallol Acid (Pyrogallol) | C6H3(OH)3 | - | - | 73 | A | - | 150 | - | A | 150 | 80 | - | 200 | A | A | - | - | - | - | - | A | A |
| Rum | - | - | - | 100 | 100 | 100 | A | - | A | A | 70 | - | - | A | A | A | A | A | A | A | A | A |
| Salt Brine | - | - | - | 140 | 190 | 180 | 250 | 140 | A | A | 280 | 250 | 180 | A | B | A | A | A | A | A | A | A |
| Sea Water | - | - | - | 140 | 190 | 180 | 250 | 140 | A | A | 280 | 250 | 180 | A | C | A | A | A | A | A | A | A |
| Silicone Oil | - | - | - | 140 | 150 | 150 | 250 | - | A | 350 | 190 | 140 | 140 | A | A | A | A | A | A | A | A | A |
| Silver Cyanide | AgCN | - | 3.95 | 140 | 180 | 180 | 250 | 140 | A | 350 | 140 | 140 | 200 | - | - | - | - | - | - | - | - | - |
| Silver Nitrate | AgNO3 | - | 4.32 | 140 | 180 | 180 | 280 | 140 | A | 350 | 250 | 200 | 200 | A | A | A | A | A | A | A | A | A |
| Soap Solutions | - | - | - | 140 | 190 | 180 | 280 | B | A | 350 | 200 | 200 | 140 | A | A | A | A | A | A | A | A | A |
| Sodium Acetate | NaC2H3O2 | - | 1.5 | 140 | 180 | 180 | 250 | 140 | A | 350 | X | 170 | 70 | A | A | A | A | A | A | A | A | A |
| Sodium Alum | - | - | - | 140 | 180 | 180 | 250 | 140 | A | 200 | 210 | 160 | 140 | - | - | B | B | A | A | A | A | A |
| Sodium Benzoate | C6H5COONa | - | - | 140 | 190 | 180 | 250 | 140 | - | 300 | 200 | 210 | - | - | - | - | - | - | - | - | - | - |
| Sodium Bicarbonate | NaHCO3 | SAT | 2.2 | 140 | 190 | 140 | 280 | 140 | A | 400 | 300 | 210 | 200 | A | A | A | A | A | A | A | A | A |
| Sodium Bichromate | Na2Cr2O7 | - | - | 140 | 140 | 180 | 250 | 140 | - | 350 | 200 | 140 | 70 | - | - | - | - | - | - | - | - | - |
| Sodium Bisulfate | NaHSO4 | SAT | 2.4 | 140 | 200 | 180 | 280 | 140 | A | 250 | 250 | 200 | 100 | A | A | A | A | A | A | A | A | A |
| Sodium Bisulfide | NaHSO3 | SAT | 1.5 | 140 | 190 | 180 | 250 | 140 | A | 350 | 250 | 200 | 200 | A | A | A | A | A | A | A | A | A |
| Sodium Borate (Borax) | Na2B4O7 | - | 1.7 | 100 | 190 | 200 | 250 | 140 | A | 300 | 180 | 140 | 100 | A | A | A | A | A | A | A | A | A |
| Sodium Bromide | NaBr | - | - | 140 | 190 | 180 | 250 | - | - | 300 | 250 | 210 | 200 | A | A | - | - | - | - | - | A | A |
| Sodium Carbonate | Na2CO3 | SAT | 1.55 | 140 | 190 | 180 | 250 | B | A | 350 | 200 | 140 | 200 | A | A | A | A | A | A | B | A | A |
| Sodium Chlorate | NaClO3 | SAT | 2.5 | 100 | 190 | 180 | 250 | B | A | 350 | 180 | 140 | 200 | A | A | A | A | A | A | A | A | A |
| Sodium Chloride (Salt) | NaCl | SAT | 2.2 | 140 | 210 | 180 | 280 | 140 | A | 350 | 200 | 140 | 100 | A | B | A | A | A | A | A | A | A |
| Sodium Chlorite | NaClO2 | SAT | - | X | X | 73 | 140 | - | - | 200 | X | X | 200 | - | - | - | - | - | - | - | A | A |
| Sodium Chromate | NaCrO4 | SAT | - | - | - | A | 200 | - | A | A | 70 | 70 | X | A | B | - | - | - | - | - | A | A |
| Sodium Cyanide | NaCN | SAT | - | 140 | 170 | 180 | A | B | A | 350 | 200 | 140 | 140 | A | A | - | - | - | - | - | A | A |

CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | | SEALS | |
|------------------------------|--------------|---------------|--------------------------------|----------|------|--------------------|------|--------------|-------|--------|------------|------|---------|---------------------|---------------------|----------|-------------|--------|---------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYPALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON | CERAMIC |
| Sodium Dichromate | Na2Cr2O7 | SAT | 2.5 | 140 | 140 | 140 | 250 | - | A | 350 | 200 | 140 | 70 | - | - | - | A | A | A |
| Sodium Ferricyanide | Na3Fe(CN)6 | SAT | 1.5 | 140 | 190 | 150 | 250 | - | - | 300 | 140 | 140 | 200 | C | X | - | - | A | A |
| Sodium Ferrocyanide | Na4Fe(CN)6 | SAT | 1.5 | 140 | 190 | 150 | 250 | - | - | 350 | 140 | 140 | - | - | - | - | - | A | A |
| Sodium Fluoride | NaF | SAT | 2.6 | 140 | 190 | 180 | 250 | C | - | 350 | C | 140 | 200 | C | X | A | A | A | A |
| Sodium Hydroxide | NaOH | 20 | 1.2 | 140 | 190 | 180 | 73 | X | A | 350 | 100 | 210 | 140 | A | A | A | A | A | A |
| Sodium Hydroxide | NaOH | 30 | 1.3 | 140 | 190 | 180 | X | X | A | 350 | 100 | 210 | 140 | A | A | A | A | A | A |
| Sodium Hydroxide | NaOH | 50 | 1.5 | 140 | 190 | 180 | X | X | A | 350 | X | 180 | 140 | A | A | A | A | B | A |
| Sodium Hydroxide | NaOH | 70 | 1.7 | 140 | 190 | 180 | X | X | B | 350 | X | 70 | 100 | X | B | A | B | B | A |
| Sodium Hydroxide Conc. | NaOH | SAT | 2.1 | 140 | 150 | 120 | X | X | - | 70 | X | 100 | 72 | X | X | - | - | X | - |
| Sodium Hypochlorite | NaOCL | 10 | - | 140 | 190 | C | 250 | B | C | 300 | 140 | 70 | 150 | C | C | B | C | C | A |
| Sodium Hypochlorite Conc. | NaOCL | 20 | - | 140 | 190 | X | 250 | X | C | 300 | 180 | B | 100 | C | C | B | C | C | A |
| Sodium Metaphosphate | (NaPO3)n | - | - | - | 190 | X | 250 | - | - | A | 180 | 70 | 70 | A | A | - | - | A | A |
| Sodium Metasilicate | Na2SiO3 | - | - | 140 | 190 | 180 | 250 | - | - | 350 | 200 | - | - | A | A | - | - | A | A |
| Sodium Nitrate | NaNO3 | SAT | 2.3 | 140 | 180 | 180 | 250 | B | A | 400 | 210 | 200 | 100 | A | A | A | A | B | A |
| Sodium Nitrite | NaNO2 | SAT | 2.2 | 140 | 180 | 180 | 250 | - | - | 400 | 200 | 170 | 140 | A | A | A | - | A | A |
| Sodium Perborate | NaBO3 | - | - | 140 | 190 | 180 | 250 | - | - | 350 | A | A | 200 | B | B | - | - | A | A |
| Sodium Perchlorate | NaClO4 | SAT | 2.02 | 140 | 180 | 180 | 250 | - | - | 350 | - | - | - | - | - | - | - | - | - |
| Sodium Peroxide | Na2O2 | SAT | 2.8 | 140 | 180 | 180 | 200 | - | - | 250 | 180 | 140 | 200 | A | A | - | B | A | A |
| Sodium Polyphosphate | - | - | - | 140 | 180 | 180 | 250 | - | - | 350 | 200 | 150 | 200 | A | A | A | A | A | A |
| Sodium Silicate | Na2OSiO2 | - | - | 140 | 190 | 180 | 250 | - | A | 350 | 200 | 200 | 200 | A | A | A | B | A | A |
| Sodium Sulfate | Na2SO4 | SAT | 2.7 | 140 | 190 | 150 | 280 | 140 | A | 400 | 200 | 140 | 140 | A | A | A | A | A | A |
| Sodium Sulfide | Na2S | 25 | 1.4 | 140 | 190 | 180 | 250 | 140 | A | 350 | 200 | 140 | 200 | A | A | A | B | A | A |
| Sodium Sulfite | Na2SO3 | SAT | 2.6 | 140 | 190 | 180 | 250 | 140 | - | 350 | 200 | 140 | 140 | A | A | A | A | A | A |
| Sodium Terabornate | Na2B4O7 | - | - | 140 | 180 | 120 | - | - | - | 300 | 140 | - | 100 | A | B | - | - | A | A |
| Sodium Thiocyanate | NaSCN | - | - | 140 | 140 | 140 | 240 | 140 | - | 250 | 180 | 140 | - | - | - | - | - | A | A |
| Sodium Thiosulfate | Na2S2O3 | SAT | 1.7 | 140 | 180 | 180 | 250 | 140 | A | 350 | 200 | A | 80 | A | A | A | A | A | A |
| Stannic Chloride | Na2SnCl6 | SAT | 2.3 | 140 | 190 | 150 | 280 | - | - | 350 | 200 | 100 | 70 | X | X | A | B | A | A |
| Stannous Chloride | SnCl2 | - | - | 140 | 180 | 180 | 250 | A | - | 250 | B | 100 | B | C | X | A | A | - | - |
| Starch (Amylum) | - | 100 | 1.51 | 140 | 180 | 180 | 250 | 140 | - | 350 | 200 | 100 | 140 | A | A | A | A | A | A |
| Stearic Acid | - | SAT | 0.84 | 140 | 190 | 120 | 250 | B | - | 350 | 80 | 140 | 120 | A | A | A | A | A | A |
| Stoddard Solvent | - | - | - | A | A | X | 250 | X | A | 300 | 180 | X | X | A | A | A | A | A | A |
| Styrene | C6H5CH:CH2 | 100 | 0.9 | - | - | - | 200 | - | - | 250 | B | X | X | A | A | - | - | A | A |
| Succinic Acid | - | SAT | 1.55 | 140 | 170 | 150 | 150 | - | - | 200 | 70 | 70 | - | A | A | - | - | - | - |
| Sugar Solutions | - | - | - | 140 | 200 | 180 | 270 | - | - | 350 | 200 | 140 | 140 | A | A | A | A | A | A |
| Sulfate Liquors (Paper Pulp) | - | - | - | - | - | 150 | 150 | - | - | 200 | - | - | - | C | C | - | A | - | - |
| Sulfur Chloride | S2CL2 | SAT | 1.69 | 140 | 190 | X | 250 | - | - | 250 | 180 | X | 70 | X | X | - | - | - | - |
| Sulfur Dioxide Wet | SO2 | - | - | 100 | 150 | 180 | 250 | 70 | - | 300 | 140 | 140 | 200 | A | A | - | - | - | - |
| Sulfuric Acid | H2SO4 | 10 | 1.09 | 140 | 190 | 180 | 250 | 140 | A | 250 | 200 | 140 | 200 | C | X | A | A | A | A |
| Sulfuric Acid | H2SO4 | 30 | 1.2 | 140 | 190 | 150 | 250 | 140 | A | 250 | 200 | 140 | 200 | X | X | C | B | A | A |
| Sulfuric Acid | H2SO4 | 50 | 1.4 | 140 | 190 | 150 | 200 | 140 | A | 250 | 200 | 140 | 200 | X | X | C | B | A | A |
| Sulfuric Acid | H2SO4 | 70 | 1.7 | 140 | 190 | 140 | 200 | X | - | 200 | 200 | X | X | X | X | X | X | B | A |
| Sulfuric Acid | H2SO4 | 98 | 1.85 | X | X | X | 140 | X | X | 200 | 200 | X | X | X | C | X | X | X | A |
| Sulfuric Acid | H2SO4 | 100 | 1.86 | X | X | X | X | X | X | 200 | 100 | X | X | X | C | X | X | X | A |
| Sulfurous Acid | H2SO3 | - | - | 140 | 180 | 180 | 250 | - | - | 300 | 180 | X | 150 | A | B | - | - | A | A |
| Tannic Acid | C76H52O46 | - | - | 140 | 200 | 180 | 250 | X | - | 250 | 100 | 70 | 100 | A | A | A | B | A | A |
| Tanning Liquors | - | - | - | 140 | 190 | 73 | 68 | X | A | 250 | 200 | - | 70 | A | A | A | A | A | A |
| Tartaric Acid | - | SAT | 1.8 | 140 | 180 | 140 | 250 | 140 | - | 250 | 180 | X | 200 | A | A | A | B | A | A |
| Tetrachlorethane | CHCL2CHCL2 | - | - | X | X | A | 250 | - | - | 350 | 70 | X | X | A | A | A | A | A | A |
| Tetrahydrofuran | - | - | - | X | X | X | X | X | A | A | B | B | X | A | A | - | - | A | A |
| Toluene | CH3C6H5 | 100 | 0.9 | X | X | X | 150 | X | A | 200 | B | X | X | A | A | A | A | A | A |
| Tomato Juice | - | - | - | 140 | 190 | 150 | 250 | 70 | A | 350 | 200 | 200 | X | A | A | A | A | A | A |
| Transformer Oil | - | - | - | 140 | 190 | 73 | 200 | X | - | 300 | 180 | X | - | A | A | - | - | A | A |
| Tributyl Phosphate | (C4H9)3PO4 | - | - | X | X | 70 | 100 | - | - | 140 | X | 70 | X | - | - | A | - | A | A |
| Trichloroacetic Acid | CCL3COOH | SAT | 1.6 | 73 | 72 | 100 | 100 | - | - | 140 | 180 | 70 | 70 | - | - | B | - | - | - |
| Trichloroethane | CHCL2CH2CL | - | - | X | X | X | - | X | C | 150 | A | X | - | A | C | A | A | A | A |
| Trichloroethylene | CHCL:CCL2 | 100 | 1.1 | X | X | X | 250 | X | C | 200 | 200 | X | X | A | A | A | A | A | A |
| Triethanolamine | (HOCH2CH2)3N | 100 | 1.12 | 72 | X | X | X | - | - | A | X | 70 | 150 | - | - | A | - | - | - |
| Triethylamine | (C2H5)3N | - | - | A | A | - | - | - | - | A | 200 | - | - | - | - | - | - | A | A |
| Trisodium Phosphate | Na3PO4 | - | - | 140 | 190 | 180 | 250 | - | - | 350 | 180 | 70 | 100 | A | A | - | - | - | - |
| Turbine Oil | - | - | - | 72 | 72 | 70 | - | - | - | 250 | 140 | X | X | A | A | - | - | A | A |
| Turpentine | C10H16 | 100 | 0.9 | A | A | B | 250 | X | A | 300 | 180 | X | X | A | A | A | B | A | A |
| Urea | CO(HN2)2 | SAT | 1.3 | 140 | 180 | 180 | 250 | X | - | 250 | 180 | 140 | 100 | - | - | - | - | - | - |

CHEMICAL RESISTANCE CHART

| CHEMICALS | FORMULAS | CONCENTRATION | APPROX. SP. GR. @ STATED CONC. | PLASTICS | | | | | | | ELASTOMERS | | | ALLOYS | | | | SEALS | |
|----------------------------|--------------|---------------|--------------------------------|----------|------|--------------------|------|--------------|-------|--------|------------|------|--------|---------------------|---------------------|----------|-------------|--------|---------|
| | | | | PVC | CPVC | POLYPROPYLENE (PP) | PVDF | POLYETHYLENE | RYTON | TEFLON | VITON | EPDM | HYALON | 316 STAINLESS STEEL | 304 STAINLESS STEEL | TITANIUM | HASTELLOY C | CARBON | CERAMIC |
| Varnish | - | - | - | - | - | A | 250 | - | A | 250 | 68 | X | X | A | A | - | - | A | A |
| Vegetable Oil | - | - | - | 140 | 150 | 140 | 200 | - | A | 300 | 300 | 140 | 200 | A | A | - | - | A | A |
| Vinegar (4-8% Acetic Acid) | - | - | - | 140 | 150 | 140 | 200 | 140 | A | 300 | 180 | 140 | 200 | A | A | - | - | A | A |
| Vinyl Acetate | - | 100 | 0.93 | X | X | - | 250 | - | - | 300 | 180 | 70 | 200 | A | A | - | - | - | - |
| Water Acid Mine | - | - | - | 140 | 190 | 150 | 280 | - | A | A | 180 | 250 | 200 | A | A | - | A | A | A |
| Water Deionized | H2O | - | - | 140 | 190 | 180 | 280 | 140 | A | 400 | 140 | 250 | 200 | A | A | A | A | A | A |
| Water Distilled | H2O | - | - | 140 | 190 | 180 | 280 | 140 | A | 400 | 140 | 250 | 200 | A | A | A | A | A | A |
| Water Potable | H2O | - | - | 140 | 190 | 180 | 280 | 140 | A | 400 | 140 | 250 | 200 | A | A | A | A | A | A |
| Water Salt | H2O | - | - | 140 | 190 | 180 | 280 | 140 | A | 400 | 180 | 250 | 200 | A | A | A | A | A | A |
| Whiskey | - | SAT | 0.9 | 140 | 190 | 180 | 250 | X | A | 350 | 180 | 200 | 100 | A | A | A | A | A | A |
| White Liquor | - | - | - | 140 | 190 | 180 | 250 | - | A | 350 | 180 | 170 | 140 | A | A | A | A | A | A |
| Wines | - | - | - | 140 | 190 | 140 | 250 | 140 | - | 300 | 180 | 170 | 140 | A | A | A | A | A | A |
| Xylene | C6H4(CH3)2 | 100 | 0.9 | X | X | X | 250 | X | - | 350 | 180 | X | X | A | A | - | A | A | A |
| Zinc Acetate | Zn(C:2H3O2)2 | SAT | 1.7 | 140 | 180 | 180 | 250 | 140 | - | 350 | 70 | 180 | 70 | - | - | - | - | A | A |
| Zinc Chloride | ZnCL2 | SAT | 2.9 | 140 | 190 | 180 | 250 | 140 | A | 350 | 200 | 180 | 200 | A | B | A | A | A | A |
| Zinc Nitrate | Zn(NO3)2 | SAT | 2.06 | 140 | 190 | 180 | 250 | 140 | A | 350 | 200 | 180 | 200 | - | - | - | - | A | A |
| Zinc Salts | - | - | - | 140 | 190 | 180 | 250 | 140 | A | 350 | 200 | 180 | 200 | - | - | - | - | A | A |
| Zinc Sulfate | ZnSO4 | SAT | 2 | 140 | 190 | 180 | 50 | 140 | A | 400 | 200 | 180 | 200 | - | - | - | - | A | A |

Plating Solutions:

- 1) Arsenic, conventional (110°F)
- 2) Brass, conventional barrel/rock (90°-120°F), conventional (140°F), alkaline lightspeed (140°-160°)
- 3) Bronze, conventional cyanide, alkaline (160°F)
- 4) Cadmium, alkaline cyanide (75°-90°F), acid sulfate (60°-90°F), neutral chloride (70°-100°F)
- 5) Chrome, trivalent: conventional, hexavalent; conventional (120°-140°F), hexavalent functional (hard) (130°-140°F)
- 6) Copper, alkaline cyanide strike (75°-140°F), pyrophosphate (72°-86°F) acid sulfate (ambient temp.) acid fluoborate (65°-150°F), electroless (78°F)
- 7) Gold, decorative (130°-160°F), alkaline cyanide (60°-160°F), neutral cyanide (120°-160°F), acid cyanide (70°-120°F) electric (pure, bright, hard, soft) (95°-160°F)
- 8) Indium, sulfamide (ambient temp.), fluoborate (70°-90°F)
- 9) Iron, chloride (190°-210°F), sulfate (150°F), sulfate-chloride (80°-160°F), fluoborate (135°-145°F)
- 10) Nickel, conventional sulfamate (90°-140°F), watts semi-bright and bright (120°-140°F), electroless (low, mid, and high phosphorous) baron (180°- 195°F)
- 11) Palladium, sulfamate (77°-95°F), chloride (77°-220°F), acid chloride (104°-122°), nickel (86°-113°F)
- 12) Platinum, sulfate (104°), acid (149°F), alkaline (149°-167°F)
- 13) Rhodium, phosphate, sulfate, phosphate-sulfate (104°-122°F)
- 14) Ruthenium, conventional sulfamate (80°-140°F), electroplated (120°-180°F)
- 15) Silver, cyanide (70°-85°F) cyanide strike (60°-80°F), non-cyanide high speed (140°-160°F)
- 16) Tin, tin lead [tin/lead solder (70°-100°F), tin (70°-130°F), lead (70°-100°F), alkaline tin (60°-110°F)], tin nickel [conventional (140°-160°F), pyrophosphate (122°F)]
- 17) Zinc, acid chloride (60°-130°F), alkaline cyanide/non-cyanide (60°-110°F), zinc alloy (cobalt, iron or nickel) (77°-104°F)

FOR PLASTICS AND ELASTOMERS, we have given the maximum recommended temperature use for the specific chemicals. Where there are no markings, sufficient data was not available for a recommendation. Where an "X" is used, the material is unacceptable for the specific chemical.

FOR ALL, we have ratings as follows:

- A = Excellent
- B = Good, minor effect
- C = Fair, needs further testing
- D = Unsuitable

We believe the information contained on this chemical resistance chart to be accurate. However, we do not assume any liability whatsoever for the accuracy or completeness of such information.

Final determination of the suitability of any information or product for a specific material compatibility is testing under actual service for the particular application.