

CHEMICAL COMPATIBILITY TABLE
For ChemQuik®, DrumQuik®, DrumQuik PRO & Other Common Colder Series Coupling Materials
(Updated 01/10/2011)

INTERPRETATION OF TEST DATA (In 30 days to 1 year of exposure)

Table with columns for Swelling (Linear, Volumetric), Loss of Tensile Strength (Plastics, Elastomers), and Description of Chemical Attack. Includes a legend for A, B, C, NR ratings.

NOTE: All temperatures are in degrees Fahrenheit. Conversion: °C = (°F - 32)/1.8

WARNING: The compatibility data in this guide was assembled from 3 main sources, a) the Chemical Resistance Guides published by COMPASS PUBLICATIONS®, b) the Chemical Resistance guide published by VICTREX, the manufacturer of PEEK™ and c) the chemical manufacturers themselves. The table is to be used as a general guide only.

Main compatibility table with columns: CHEMICAL (Name, Formula), SPRING Materials (Hastelloy C, 316 SS, PPS, PEEK, Teflon), COUPLING Materials (Polypropylene, HDPE, PVDF, PTFE/PFA, Acetal/POM, ABS, Polysulfone, Polycarbonate), SEAL Materials (FKM, EPDM, FFKM, Buna, TPO, Silicone).

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(Updated 01/10/2011)

INTERPRETATION OF TEST DATA (In 30 days to 1 year of exposure)

| | Swelling | | Loss of Tensile Strength | | Description of Chemical Attack |
|----|-------------------|-------------------------|--------------------------|--------------|---|
| | Linear (Plastics) | Volumetric (Elastomers) | (Plastics) | (Elastomers) | |
| A | < 10% | <= 15% | < 15% | <= 15% | Excellent, little or no swelling, softening or surface deterioration Good chemical resistance, minor swelling, softening or deterioration Limited chemical resistance, moderate attack, conditional service Severe attack, not recommended for use |
| B | < 15% | <= 30% | < 30% | <= 30% | |
| C | < 20% | <= 50% | < 50% | <= 60% | |
| NR | > 20% | > 50% | > 50% | > 60% | |

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| CHEMICAL | | SPRING Materials | | | | | COUPLING Materials | | | | | | | SEAL Materials | | | | | | |
|--|---------------------------------------|--|--|-------------------------------|--------------------------------|---|-----------------------------------|--|---|---|---|--------------------------|------------------------------------|---|---|--------------------------------------|-------------------------------------|---------------------------------------|---------------------------|-------------------------------------|
| Name | Formula (CAS #) | Hastelloy C (276) | 316 SS | PPS | PEEK™ | Teflon® Encapsulated 316SS (TESS) | Polypropylene | HDPE | PVDF | PTFE/PFA | Acetal/POM (Celcon) | ABS | Polysulfone | Polycarbonate | FKM (Viton®) | EPDM | FFKM (Chemraz® / Simriz® / Kalrez®) | Buna | TPO (Santoprene) | Silicone |
| (CAN) | (16774-21-3) | | | | | | | | | | | | | | | | | | | |
| Chlorine (Anhydrous) (Dichlorine, Chlorinated water) | CL2 (7782-50-5) | A to 140° (to 10 ppm to 70°) | A to 70° (to 10 ppm to 70°) | NR | A to 10% to 70° NR Conc. @ 70° | A (PTFE Encapsulated 316 Stainless St.) | NR | A to 2% to 140° NR | A to 100% to 200° NR AB at 100% to 230° | A | NR at 10-100% at 70° | NR | NR at 70° | NR at 70° | C 400 ppm at 70° | B 400 ppm at 70° C 400 ppm at 104° | A to 70° | C sat'd at 70° NR 400 ppm at 70° | NR | NR at 70° |
| Chlorine Dioxide (Chlorine Peroxide) (CDG Solution 3000, 0.3% Sol., 3000 ppm) CLOROX (5.25% Sodium Hypochlorite) | CLO2 10049-04-4 CLNaO | A to 70° AB 15% to 175° C 8-10% @ 150° | A 4-5% to 36° NR 10-100% @ 70° | A | NR | A | NR 15-100% @ 70° | NR @ 70° | A to 70° (Stressed) B to 120° (Stressed) NR with UV Present | A | NO DATA | B @ 70° | NO DATA | NO DATA | AB to 8% @ 70° NR 15% @ 70° A 8% (HIFLUOR) | NR 8% @ 70° | A | NR 8% @ 70° | NR @ 70° | C/NR @ 70° |
| Citric Acid | C6H8O7 (77-92-9) | A to boiling | A to 50% B@100% 70-212° NR 60-100% >125° | A to 220° | A to 212° | A (PTFE Encapsulated 316 Stainless St.) | A to 120° AB to 175° NR @ 212° | A to 100% to 160° AB to 100% at 180° | A | AB at 15% at 140-150° B at 15-100% at 70° C at 100% at 140-150° | A to 0.03% to 140° NR 5% | A 10% to 70° B 20% 2 70° | A to 100% to 150° A to 100% 10 70° | A to 100% to 70° B at 10-15% at 120° C at 15% at 150° | A | A | A | A to 200° B at 212° | A to 70° | A to 200° |
| Copper Sulfate (Cupric Sulfate) | CuO4S (7758-98-7) | A to boiling | A to 100% to 160° A to 45% to 180° A to 10% to 2121° | A to 223° | A to 212° | A (PTFE Encapsulated 316 Stainless St.) | A | A to 50% to 150° AB at 50-100% to 180° | A | AB to 100% to 140° | A | A to 70° | A to 200° | A to 100% to 70° | A to conc. to 176° AB to 212° | A to conc. to 176° AB to 212° | A | A to conc to 176° AB any conc to 212° | A 5% to 70° A so/n to 70° | A to 200° |
| Corn Oil | NA | A | A | A to 100° | A to 70° | A | A | A | A | AB | A to 70° | A | A | A | A | NR | A | A | A to 212° | A to 200° |
| Corn Syrup | NA | NO DATA | A | A to 100° | A to 70° | A | A | A to 150° | A | A | AB to 140° | AB to 70° | A | A | A | A | A | A | NO DATA | A to 200° |
| Cotton Seed Oil | NA | A | A | A to 200° | A | A | A | A to 140° | A | A | AB | NO DATA | A | A | A | A | A | A | AB to 70° | A to 200° |
| CRESOL (M, O & P) | C14H16O2 | AB to 200° | AB 100° A 100% to 140° | A to 200° | A to 70° | A | NR | AB to 50% C/NR 50-100% @ 70° ** (OK Fluorinated/TEST) | A to 150° | A | NR 50 - 100% | NR | NO DATA | NR | A to 104° | NR | A | C/NR | NR | C/NR |
| Cyanide Solutions (Hydrogen Cyanide, Formonitrile) (Hydrocyanic acid solution, <20%) | CHN (74-90-8) | A 50% to 70° B 100% to 224° A 100% to 140° | A 10% to 70° B 10% @ 212° A 100% to 140° | NO DATA | A to 212° | A | A to 180° | A to 150° AB to 180° | A | NR | NR | B @ 70° | B @ 70-200° | B @ 70° | A to 140° | A to 140° | A | AB to 140° | AB 100% | AC @ 70° NR @ 120° |
| Cyclohexanone (Cyclohexyl ketone) | C6H10O (108-94-1) | A to 100° | A to 100 to 100° | A to 200° | A to 70° | A to 500° | AB to 70° B at 70-100° NR at 120° | NR | AB to 122° | A to 500° | A to 70° AB to 140° | NR | NR at 70° | NR at 70° | NR at 70° | BC at 70° | AB at 70° | NR at 70° | NR | NR at 70° |
| Dibutyl Phthalate (DBP) | C16H22O4 (84-74-2) | AB to 200° | AB to 150° AB @ 100% to 480° | A to 200° | A to 70° | A | NR at 120° | NR >140° | AB to 70° B @ 100° C @ 140° | A | A to 70° AB to 140° | NR | AB to 185° NR @ 200° | NR | HIFLUOR A to 70° BC 70-104° (static) NR (dynamic) A Viton ETP | AB (static) C (dynamic) | A | NR | B @ 70° | B @ 70 (static) C (dynamic) |
| Dichloroacetic Acid (DCA) | CL2CHCO2H (79-43-6) | NO DATA | NO DATA | NO DATA | A to 100° NR >100° | A (PTFE Encapsulated 316 Stainless St.) | AB to 100% to 125° | BC at 70° | AB to 100% to 212° AB 100% to 125° | A | NO DATA | NO DATA | NO DATA | NO DATA | NR | NR | A | NR | NO DATA | NR |
| Dichloromethane (Methylene Dichloride) | CH2CL2 (75-09-2) | AB | A to 70° | A 100% to 70° A/NR 40% @ 100° | NR | A (PTFE Encapsulated 316 Stainless St.) | B/NR @ 70° C/NR @ 88-122° | NR | AB to 100° to 100° B 100% 104 - 125° | A | A to 70° | NR | NR at 70° | NR at 70° | HIFLUOR A to 70° B @ 70° | BC to 130° NR @ 140° | A | NR at 70° | NR | NR |
| Diesel Fuel | N/A | A to 140° AB to 200° | A to 200° | A to 200° | A to 70° | A | AC @ 70° BC @ 120° | AC @ 70° BC @ 140° | AB to 125° | A | A to 150° | NO DATA | A to 200° | A to 200° | A to 70° | NR | A | A to 70° AB to 250° | C/NR | NR |
| Diethylene Glycol (Ethylene Diglycol, Carbitol, Glycol Ether) | C4H10O3 (111-46-6) | B 100% @ 70° | A | NO DATA | A 90% to 70° | A | A to 225° | A to 140° | A to 140° | A | A 90 - 100% to 70° | B @ 70° | B @ 70-122° | B @ 70° | A | A | A | A | A | B 70-200° C @ 70° (Dynamic) |
| Diethanolamine (DEA, Diolamine) | C4H11NO2 (111-42-2) | A | A | NO DATA | A to 120° B @ 150° NR > 150° | A | A 100% to 150° AB 100% to 225° | AB to 70° | NR | A | NO DATA | NO DATA | A to 70° | NO DATA | NR | AB 70-160° | A | NR | A to 70° | NR |
| Diisopropylether (Isopropylether) | C6H14O (108-20-3) | NO DATA | NO DATA | A to 70° | A | A | NR | B/NR at 70° NR at 140° ** (OK Fluorinated/TEST) | A 100% to 100° | A | A to 70° | NO DATA | NR | NR | HIFLUOR B to 70° NR | NR | A | B to 100% to 140° NR @ 200° | C/NR @ 70° | NR |
| Dimethyl Acetamide (DMAC) | C4H9NO (127-19-5) | A | A | NO DATA | A | A | AB to 125°F | A to 122° | NR | A | NO DATA | NO DATA | NR at 70° | NR at 70° | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | AB to 70° C @ 70° (Dynamic) |
| Dimethyl Sulfoxide (DMSO) | C2H6OS (67-68-5) | A | A | A to 200° | B @ 70-122° | A | A to 125° | A to 122° | NR | A | NR | NO DATA | NR | NR | NR | A to 70° | A | NR | A | A to 70° (Static) C @ 70° (Dynamic) |
| Diocetyl Phthalate (DOP) | C24H38O4 (82208-43-3) | A to 100° | A @ 100% to 100° AB to 480° | A to 200° | A | A | NR | C/NR @ 70° NR @ 120° ** (OK Fluorinated/TEST) | AB to 70° BC @ 104° C @ 104 | A | A to 70° | NR | A @ 100% to 70° | NR | NR | B 70-200° (static) C @ 70° (dynamic) | A | NR | NR | NR |
| Dipropylene Glycol (Polypropylene Glycol) | C6H14O3 (78644-49-2) | NO DATA | NO DATA | NO DATA | NO DATA | A | A to 125° | A to 122° AB to 150° | AB | A | A to 70° | NO DATA | B @ 70-122° | B @ 70° C @ 122° | HIFLUOR A to 70° A to 70° | A to 70° | A | A to 70° | A to 70° | NO DATA |
| Dipropylene Glycol Methyl Ether (DPGME) | C7H16O3 (83730-60-3) | NO DATA | NO DATA | NO DATA | NO DATA | A | AB to 150° | NO DATA | AB to 75° | A | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA |
| DI water (Deionized Water) (Ultra Pure Water, 17 megaohm +) | H2O | A | 8 @ 12 - 18.2 megaohm A @ < 12 megaohm | A to 200° | A | A (PTFE Encapsulated 316 Stainless St.) | A | A to 140° | A | A | NO DATA | A to 70° | A to 200° | NO DATA | A to 70° AB to 200° | A | A | A to 70° AB to 200° | NO DATA | AB to 70° C @ 70° (Dynamic) |
| Ethanolamine (ETA, 2-Aminoethanol) | C2H7NO (9007-33-4) | AB 100% to 200° | A to 100% to 212° | A 100% to 200° | A to 120° B > 120 | A | A 100% to 70° | AB @ 70° B @ 122° | NR | A | NR | NO DATA | A to 200° | NR | NR | A to 120° B to 200° | A | B to 100% 70-80° NR @ 120° | A to 70° | B @ 70° NR @ 120° C @ 70° (Dynamic) |
| Ether (Ethyl Ether) (Diethyl Oxide) Ethyl Acetate (Acetic Ether) | C4H10O (60-29-7) C4H8O2 (141-78-6) | A@100% to 200° A to 56% to 171° | A@100% to 212° | A to 200° | A to 212° | A to 500° | NR | NR at 100% at 140° | AB to 94° B @ 104° NR @ 140° | A | A to 70° AB at 140° | NR | NR at 70° | NR at 70° | NR | NR | A | NR at 70° | NR | NR |
| 2 Ethoxy Ethyl Acetate (Ethoxyethanol Acetate) | C6H12O3 (111-15-9) | A | A | A | A to 70° | A (PTFE Encapsulated 316 Stainless St.) | A to 180° | BC at 100% at 70° C at 100% at 122° ** (OK Fluorinated/TEST) | AB to 100% to 200° AB at 100% to 70° BC at 100% at 140° | A | A to 10% to 200° AB at 100% to 70° BC at 100% at 140° | AC @ 70° | NR at 70° | NR at 85-100% at 70° | HIFLUOR A to 70° C/NR | A @ 100% to 130° | A | NR at 70° | NR | B @ 70° NR @ 200° C @ 70° (Dynamic) |

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| | Swelling | | Loss of Tensile Strength | | Description of Chemical Attack |
|----|-------------------|-------------------------|--------------------------|--------------|---|
| | Linear (Plastics) | Volumetric (Elastomers) | (Plastics) | (Elastomers) | |
| A | < 10% | <= 15% | < 15% | <= 15% | Excellent, little or no swelling, softening or surface deterioration Good chemical resistance, minor swelling, softening or deterioration Limited chemical resistance, moderate attack, conditional service Severe attack, not recommended for use |
| B | < 15% | <= 30% | < 30% | <= 30% | |
| C | < 20% | <= 50% | < 50% | <= 60% | |
| NR | > 20% | > 50% | > 50% | > 60% | |

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| CHEMICAL | | SPRING Materials | | | | | COUPLING Materials | | | | | | | | SEAL Materials | | | | | |
|---|---|---|---|-------------------------------|--|--|--|---|--|--|--|--|--|--|---|---------------------------------------|--|---|---|----------|
| Name | Formula (CAS #) | Hastelloy C (276) | 316 SS | PPS | PEEK™ | Teflon® Encapsulated 316SS (TESS) | Polypropylene | HDPE | PVDF | PTFE/PFA | Acetal/POM (Celcon) | ABS | Polysulfone | Polycarbonate | FKM (Viton®) | EPDM | FFKM (Chemraz® / Simriz® / Kalrez®) | Buna | TPO (Santoprene) | Silicone |
| (Nonanoic Acid) | (112-05-0) | | | | | | | | | | | | | | | | | | | |
| Peracetic Acid (Peroxyacetic Acid, POAA) | C2H4O3 (79-21-0) | A | A | A | A | A | AC 40% @ 70° | AC/NR (Embrittles over time) ** (OK Fluorinated/TEST) | A | NR | NO DATA | NO DATA | NR | Viton ETP A to 70° HI FLOUR A to 70° A to 1% @ 70° C @ 100% @ 70° HIFLUOR A to 70° | A 1 & 100% @ 70° B 10% @ 70° | A to 70° | C 100% @ 70° NR 1-10% @ 70° | NO DATA | B 100% @ 70° NR 1-10% @ 70° | |
| Phenol (Carbolic Acid) | C6H6O (108-95-2) | A | A | A to 100° C @ 100% @ 200° | A Dilute to 70° NR 75-100% @ 70° Dissolves @ 75% | A | A to 104° AB to 130° | A to 100% to 158° | A | NR | NR | A to 5% to 70° NR 100% @ 70° | A to 5% @ 70° | A to 140° | NR 5 - 100% | A | NR | A/NR @ 70° | NR | |
| Phosphoric Acid | H3PO4 (7664-38-2) | A to 200° A to 50% to boiling | A to 40% to 240° A to 70% to 150° | A | A to 212° | A (PTFE Encapsulated 316 Stainless St.) | A to 185° A to 75% to 225° | A A 85% to 230° | A | C at 0.3-10% at 70° NR at 10-100% at 70° | AB to 40% to 70° B 40% @ 70° C 50-100% @ 70° | A to 100% to 200° A to 85% to 250° NR at 85% at 300° | A to 100% to 70° A to 25% to 158° B at 85% to 120° | A to 140° A to 85% to 176° A 75% to 212° A to 70° | A to 130° A to 85% to 176° B to 30% to 212° A to 70° | A | A to 10% to 104° AB to 50% to 104° | A to 45% @ 70° B 45 @ 70° C 50-100% @ 70° | NR | |
| Phosphorous Trichloride (PIC) | CL3P (7719-12-2) | A | A to 120° | A to 100% to 200° | A | A | B/NR @ 70° | A | A | AB to 180° | NR | NO DATA | NR | A | A | A | NR | NO DATA | NO DATA | |
| Piranha (3:1 Mixture of Concentrated Sulfuric Acid & 30% Hydrogen Peroxide) Plating Solution, General | N/A | A | NR | AB | NR | A | A to 90% to 104° | A to 98% to 120° | A | NR | NR | NR | NR | A | NR | A | NR | A | NR | |
| Plating Solution, Cadmium | N/A | A to 90°, Cyanide A/NR @ 100°, Fluob. | A to 140° | A to 70° | Generally OK (Etching Solution may affect, test) | A | A | A | A | A to 90, Cyanide C @ 100°, Fluoborate | NO DATA | NO DATA | NO DATA | A to 140° | A to 70° | A | A to 140° | NO DATA | NR | |
| Plating Solution, Chrome | N/A | A to 130°, Fluoride NR @ 90°, Barrel NR @ 115°, Black | A to 70° NR @ 95°, Barrel | A to 70° | Generally OK (Etching Solution may affect, test) | A | AC to 70° C @ 95° (Barrel) | A | A | B/NR @ 70° | C/NR @ 70° | NO DATA | A to 70° | A to 140° | A to 70° | A | NR | NO DATA | NR | |
| Plating Solution, Copper | N/A | A to 120° | A to 70°, Barrel A to 120°, Copper A to 120°, Cyanide | A to 70° | Generally OK (Etching Solution may affect, test) | A | A | A | A | NR, Electroless A to 120°, Strike A to 70° Sulfate | NO DATA | NO DATA | NO DATA | A to 200° | A to 140° | A | A to 140° | NO DATA | NR | |
| Plating Solution, Nickel | N/A | A to 140° | A to 70° A, Cyanide C @ 70°, Sulfamate | A to 70° | Generally OK (Etching Solution may affect, test) | A | A | A | A | NO DATA | NO DATA | NO DATA | NO DATA | A to 70° | A to 140° | A | NR @ 70°, Electroless | NO DATA | NR | |
| Plating Solution, Tin | N/A | A to 125° | A to 70° C 100-125°, Fluoborate | A to 70° | Generally OK (Etching Solution may affect, test) | A | A | A to 180° | A | NO DATA | NO DATA | NO DATA | NO DATA | A to 140° | A to 104° B @ 140° | A | AB to 140° | NO DATA | NO DATA | |
| Plating Solution, Zinc | N/A | A to 70°, Alk-Cyanide A top 150°, Cyanide NR @ 140°, Chloride | A to 70°, Cyanide A to 70°, Fluoborate NR, Acid | A to 70° | Generally OK (Etching Solution may affect, test) | A | A | A to 150° | A | NO DATA | NO DATA | NO DATA | NO DATA | A to 140° | A to 70° | A | A to 140° | NO DATA | NO DATA | |
| Polyethylene Glycol (PEG, Carbowax) | C2H6O2 (71767-64-1) | A | A (Short Term) B (Long Term) | NO DATA | A | A | A to 140° AB to 180° | AB to 70° | A to 250° | A | A to 70° Sulfate | NO DATA | NO DATA | A to 70° | A to 212° | A to 176° | A | A to 70° C @ 70° (dynamic) | NO DATA | NO DATA |
| Potassium Borate (Potassium Metaborate) | BKO2 (20786-60-1) | NO DATA | NO DATA | NO DATA | A | A | A to 180° | A to 150° | A | NO DATA | NO DATA | A to 70° | NO DATA | A to 212° | A to 100% @ 212° | A (Aqueous Sol'n to 70°) | AB 70-140° NR @ 176° | NO DATA | NO DATA | |
| Potassium Carbonate (Carbonic Acid) (Potash) | CK2O3 (584-08-7) | A to 90% to 212° AB @ 100% to 140° | A to 17% to 240° AB 20- 100% to boil | A to 100% to 200° | A at 60-100% to 70° | A to 100% to 500° | A to 225° | A to 160° AB at 180° | A to 100% to 275° AB to 100% at 285° | A to 100% to 500° | A at 60-100% to 180° | A to 70° | A to 200° | A to 212° | A to 176° AB to 200° | A aqueous sol'n to 70° | A to 200° A to 180° | A to 70° | A to 200° C @ 70° (dynamic) | |
| Potassium Chlorate (Chloric Acid) (Potassium Salt) | CLKO3 (3811-04-9) | B 30-60% 125-212° B to 60% @ 212° AB @ 100% | A | A | A | A | A to 100% to 180° | A to 100% to 160° | A | A | A to 10% to 70° AB to 100% to 180° | A to 100% to 200° | A to 70° | A to 140° AB to 200° | A to 130° AB to 140-200° | A | A to 70° AC to 130° | A to 70° | AB to 125° C @ 70° (dynamic) | |
| Potassium Chloride (Salt Substitute) | CLK (7447-40-7) | A to 10% A 10-30% to 125° AB @ 100% | A to 32% to 180° AB 40-100% to 150° | A | A | A | A to 100% to 180° | A to 100% to 160° | A | A | A to 100% to 140° AB to 100% @ 180° | A to 100% to 70° | A to 100% to 200° | A to 212° | A to 176° AB to 212° | A | A to 176° B @ 212° | A to 70° | A to 100% to 200° | |
| Potassium Hydroxide (Caustic Potash) | KOH (1310-58-3) | A to 50% to 200° AB @ 100% to 185° | A to 100% to 70° A to 70% to 150° | A to 200° A to 50% to 268° | A to 212° | A (PTFE Encapsulated 316 Stainless St.) | A A 70% to 185° | A to 100% to 160° AB to 100% at 180° | *A to 25% to 140° A to 10% to 280° A 60-100% to 212° | A | B to 100% to 180° | A to 30% to 70° AB to 100% to 70° | A to 100% to 200° | C at 1% at 70° NR at 1% at 125° NR at 5-100% at 70° A to 100% to 200° | AB to 70° AB to 70% to 140° A 5% to 150° A to 140° | A (Black 550) AB (White 571 & 592) | A to 5% to 150° AB to 150° | A to 70° | AB @ 1% to 70° C 10-100% 70-200° NR (Dynamic) B @ 70° C @ 70° (Dynamic) | |
| Potassium Permanganate | KMNO4 (7722-64-7) | A to 50% to 75° AB @ 100% to 200° B to 30% 75-212° | A to 25% to 70° AB to 100% to 100° A @ 100% to 130° | A to 200° | A to 75° | A (PTFE Encapsulated 316 Stainless St.) | A to 100% to 70° A to 25% to 140° A to 10% to 180° | A to 100% to 160° A to 20% to 180° | A | A | A to 10% to 140° NR conc.-100% at 70° | B @ 70° | A to 200° | A to 200° | A to 200° B 25% @ 212° | A | AC to 150° | A to 70° | A to 70° | |
| Potassium Silicate (potassium hydroxy-oxido-oxosilane) | HKO3SI (1312-76-1) | NO DATA | AB | NO DATA | NO DATA | A | A to 70° | A to 70° | A to 275° | A | B @ 70° | NO DATA | NO DATA | A to 160° | A to 160° | A | A to 160° | A to 70° | A to 160° | |
| Potassium Sulfite (Sulfurous Acid) | K2SO3 (10117-38-1) | A @ 100% to 70° A @ 50% to 280° | AB to 100% to 100° A @ 100% to 70° | A to 70° | A | A | A to 100% to 140° | A | A to 212° | A | AB to 70° | NO DATA | A to 70° | NO DATA | A to 200° | A | A to 100% to 80° AB to 100% to 150% | NO DATA | A to 70° | |
| Propanol (Propyl Alcohol) (Rubbing Alcohol) | C3H8O (67-63-0) | A to 200° | A | A | A | A | A to 140° | A to 150° | A to 100% to 150° | A | A to 70° | NO DATA | AB to 185° | A to 212° | A to 200° | A | A | A to 120° | A to 200° | |
| Propionic Acid (Propanoic Acid Nitrile) | C3H6O2 (79-09-4) | A | A | NO DATA | A to 212° | A | A 100% to 70° | AB to 70° C @ 122° | A | NR | NR | B @ 70-122° | A to 20% to 70° NR 100% @ 70° | A @ 50% to 100° NR 100% @ 70° | A to 100% to 200° | A | AC Sat 70-200° NR 50% @ 70° | A to 70° | B @ 70° C @ 70°, dynamic | |
| Propylene Glycol (PG-12) | C3H8O2 (57-55-6) | B @ 100% @ 70° | A to 30% A @ 80-90% A @ 60% | A to 70° | A | A to 500° | AB to 160° | A to 140° AB at 180° | A to 275° AB at 280° | A to 500° | A to 70° | A to 70° | B at 70-122° | BC at 70° C/NR at 122° | A to 140° | A to 70° | A to 70° | A to 250° | AB to 70° C @ 70° (Dynamic) | |
| PGMEA (Propylene Glycol Monomethyl Ether Acetate) | C6H12O3 (108-65-6) | A | A | A | B | A | A to 140° | A | AB | A | A to 70° AB to 140° | NO DATA | NO DATA | NR | A 50% to 70° | A | NO DATA | AB to 70° | NO DATA | |
| PGME (Propylene Glycol Monomethyl Ether) (Dowtherm 209 / Dowanol PM) 2 Propanone (Hexachloroacetone) | C4H10O2 (107-98-2) C3Cl6O (116-16-5) | A NO DATA | A NO DATA | A A to 200° | B A to 212° | A A | A to 140° AB to 150° | A | AB | A | A to 70° AB to 140° | A to 70° | NO DATA | NO DATA | NR | A 50% to 70° | A | NO DATA | AB to 70° | NO DATA |
| Propylene Oxide (Methyle Ethylene Oxide) | C3H6O (75-56-9) | A to 70° | A to 140° | NO DATA | A | A | A to 70° AB @ 125° | NR @ 100% @ 70° | A | NO DATA | NO DATA | B @ 70-122° | NR | NR | B to 120° | A | NR | A to 120° | NR | |



CHEMICAL COMPATIBILITY TABLE

For ChemQuik[®], DrumQuik[®], DrumQuik PRO & Other Common Colder Series Coupling Materials
(Updated 01/10/2011)

| CHEMICAL | | INTERPRETATION OF TEST DATA (In 30 days to 1 year of exposure) | | | | | | | | | | | | | | | SEAL Materials | | | | |
|--|---------------------|--|--|--------------------------|--|--|--------------------------|--|--------------------------------|---------------------|-------------------------|-------------|-------------------|---------------------------|------------------------------|--|----------------|------------------------------|----------|------------------------------|--|
| | | Swelling | | Loss of Tensile Strength | | Description of Chemical Attack | | | | | | | | | | | | | | | |
| | | Linear (Plastics) | Volumetric (Elastomers) | (Plastics) | (Elastomers) | | | | | | | | | | | | | | | | |
| | | A | < 10% | < 15% | < 30% | Excellent, little or no swelling, softening or surface deterioration | | | | | | | | | | | | | | | |
| B | < 15% | <= 30% | < 30% | <= 30% | Good chemical resistance, minor swelling, softening or deterioration | | | | | | | | | | | | | | | | |
| C | < 20% | <= 50% | < 50% | <= 60% | Limited chemical resistance, moderate attack, conditional service | | | | | | | | | | | | | | | | |
| NR | > 20% | > 50% | > 50% | > 60% | Severe attack, not recommended for use | | | | | | | | | | | | | | | | |
| NOTE: All temperatures are in degrees Fahrenheit. Conversion: °C = (°F - 32)/1.8 | | | | | | | | | | | | | | | | | | | | | |
| Name | | SPRING Materials | | | | | COUPLING Materials | | | | | | | | SEAL Materials | | | | | | |
| Formula (CAS #) | Hastelloy C (276) | 316 SS | PPS | PEEK™ | Teflon [®] Encapsulated 316SS (TESS) | Polypropylene | HDPE | PVDF | PTFE/PFA | Acetal/POM (Celcon) | ABS | Polysulfone | Polycarbonate | FKM (Viton [®]) | EPDM | FFKM (Chemraz [®] / Simriz [®] / Kalrez [®]) | Buna | TPO (Santoprene) | Silicone | | |
| Trichloroethylene (Ethylene Trichloride) (Triad) | C2HCL3 (79-01-6) | B@90% to 212° A@100% to 212° | A@90% to 212° A@100 to 140° | AC 70-100° NR @ 200° | A to 212° | A (PTFE Encapsulated 316 Stainless St.) | NR | B at 70° C at 122° | A to 189° (blackens) | A | AB at 70-180° | NR | NR at 70° | NR at 70° | A to 200° | B | A | NR at 70° | NR | NR | |
| Triethylamine (Triethyle Amine) | C6H15N (121-44-8) | NO DATA | A | NO DATA | A to 130° NR > 150° | A | NR | ** (OK Fluorinated/TEST) AB to 70° C @ 120° | A to 70° (Turns Brown) | A | A to 70° | NO DATA | NO DATA | NO DATA | NR | A | A | A to 140° | B @ 70° | NR | |
| Triethanolamine (TEA) | C6H15NO3 (102-71-6) | A 100 to 200° | AB to 100% to 75° A 1% & 100% to 200° | A 100% to 200° | A to 70° | A | AB @ 100% 70-185° | ** (OK Fluorinated/TEST) AB to 70° NR @ 120° | AB to 100% to 125° | A | NR | AB to 70° | NR | NO DATA | HIFLUOR A to 70° NR | A to 160° | A | B to 100° | A to 70° | NR | |
| Trifluoroacetic Acid (Perfluoric acid, Perfluoroacetic acid) (TFA) | C2HF3O2 76-05-1 | B | A | NO DATA | NO DATA | A | C @ 70° | ** (OK Fluorinated/TEST) B | A to 125° | A | NO DATA | NO DATA | C/NR | NR | HIFLUOR A to 70° C @ 70° | A | B | C @ 70° | NO DATA | B @ 70° C @ 70° (Dynamic) | |
| Trimethylbenzene (Pseudocumene) | C9H12 (95-63-6) | NO DATA | NO DATA | NO DATA | A | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | NO DATA | HIFLUOR A to 70° A to 70° | NR | A | B @ 70° C @ 70° (dynamic) | NO DATA | NO DATA | |
| UREA (AdBlue, AUS32, Aqueous Urea Sol. 32.5%) (DEF, Diesel Exhaust Fluid, BlueTec) | CH4N2O 57-13-6 | A to 130° AB to 200° | A to 200° | A to 200° | A to 212° | A | A to 100% to 180° | A to 100% to 150° | A to 100% to 250° | A | A to 100% to 70° | B @ 70° | C @ 70° | NR | A to 70° AB to 200° | A | A | AB to 150° | NO DATA | AB to 70° | |
| Xylene (Xylo) | C8H10 (1330-20-7) | A | A 75-100° A@50% to 220° | A to 200° | A to 70° | A (PTFE Encapsulated) | C @ 70-140° NR @ 150° | NR at 70° | A to 175° A to 100% to 175° | A | A to 140° AB at 180° | NR | NR at 100% at 70° | NR at 70° | A to 140° | NR | A | NR at 70° | NO DATA | NR @ 70° | |

WARNING:

The compatibility data in this guide was assembled from 3 main sources, a) the Chemical Resistance Guides published by COMPASS PUBLICATIONS ©, b) the Chemical Resistance guide published by VICTREX, the manufacturer of PEEK™ and c) the chemical manufacturers themselves. The table is to be used as a general guide only. Colder Products Company is not responsible for the accuracy of this data and assumes no obligation of liability in connection with its use. Therefore, CPC insists that all customers test and evaluate the suitability for use of CPC couplings in their particular application before using the couplings!

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NOTES:
 * PVDF may discolor after prolonged exposure in Potassium Hydroxide.
 * Polypropylene may discolor after prolonged exposure in Sulfuric Acid.
 ** Fluorination of HDPE has been shown to dramatically improve the chemical resistance of HDPE material with certain chemicals. Samples are available to allow customers to evaluate in their specific application. Contact CPC Inside Sales for assistance.
 HIFLUOR® Fluorinated FKM will often be compatible in applications where standard FKM is "NR". It bridges the price gap between FKM & FFKM perfluoroelastomers and is available only by special order (minimums may apply). Contact CPC Inside Sales for assistance.
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