

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | | |
|-----------------------------|-------|--------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------------|--------------|---------------------|----------------|---------------------|--------------------|------|--------|----------|----|----|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar-SiCar | Silcar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | |
| Acetaldehyde | | 100 | U | U | 100/38 | U | A | S | S | S | S | S | S | S | S | S | S | U | A | A | A | A |
| Acetic Acid | | 10 | 210/99 | 150/65 | 200/93 | S | S | S | S | S | S | S | S | S | U | S | S | S | A | A | A | A |
| | | 15 | 210/99 | 150/65 | CF | S | S | S | S | S | S | S | S | U | S | S | S | S | A | A | A | A |
| | | 25 | 210/99 | 150/65 | 120/49 | S | S | S | S | S | S | S | S | U | S | S | S | S | A | A | A | A |
| | | 50 | 180/82 | CF | 120/49 | S | S | S | S | S | S | S | S | U | S | S | S | S | B | A | A | A |
| | | 75 | 150/65 | CF | 75/24 | S | S | S | S | S | S | S | S | U | S | S | S | S | S | B | A | A |
| Acetic Acid, Glacial | | 100 | U | U | U | | | | | | | | | | | | | | | | | |
| Acetic Anhydride | | 100 | U | U | 100/38 | S | S | S | S | S | S | S | S | U | S | S | S | S | A | CF | A | A |
| Acetone | | 1 | CF | CF | 200/93 | S | S | S | S | S | S | S | S | U | S | S | S | S | A | A | A | A |
| | | 10 | 180/82 | CF | 200/93 | S | S | S | S | S | S | S | S | U | S | S | S | S | A | A | A | A |
| | | 100 | U | U | 125/52 | S | S | S | S | S | S | S | S | U | S | S | S | S | A | A | A | A |
| Acrylamide | | 50 | 100/38 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF |
| Acrylic Acid | | 25 | 100/38 | 100/38 | 120/49 | S | S | S | S | S | S | S | S | U | U | A | A | A | A | A | A | CF |
| | | 95 | CF | CF | 100/38 | S | S | S | S | S | S | S | S | U | U | A | A | A | A | A | A | CF |
| Acrylonitrile | | 100 | U | U | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | CF |
| Adipic Acid | | All | CF | CF | 250/121 | U | A | S | S | S | S | S | S | U | U | S | S | S | B | B | CF | A |
| Alcohol, Butyl | | All | 120/49 | U | CF | S | S | S | S | S | S | S | S | S | U | S | S | S | A | A | A | A |
| | | 100 | 120/49 | U | 200/93 | S | S | S | S | S | S | S | S | S | U | S | S | S | A | A | A | A |
| Alcohol, Ethyl | | 10 | CF | CF | 200/93 | S | S | S | S | S | S | S | S | S | A | S | S | S | A | A | A | A |
| | | 95 | 80/27 | U | CF | S | S | S | S | S | S | S | S | S | A | S | S | S | A | A | A | A |
| | | 100 | CF | U | 175/79 | S | S | S | S | S | S | S | S | S | A | S | S | S | A | A | A | A |
| Alcohol, Isobutyl | | 100 | 120/49 | U | CF | S | S | S | S | S | S | S | S | S | A | S | S | S | A | A | A | A |
| Alcohol, Isopropyl | | 10 | 120/49 | U | 175/79 | S | S | S | S | S | S | S | S | S | A | S | S | S | B | A | B | A |
| | | 100 | 120/49 | U | 150/65 | S | S | S | S | S | S | S | S | S | A | S | S | S | B | A | B | A |
| Alcohol, Methyl | | 10 | CF | CF | 175/79 | S | S | S | S | S | S | S | S | U | A | S | S | S | A | A | S | A |
| | | 100 | CF | U | 150/65 | S | S | S | S | S | S | S | S | U | A | S | S | S | A | A | S | A |
| Alcohol, Sec. Butyl | | 10 | CF | CF | 200/93 | S | S | S | S | S | S | S | S | S | A | A | S | S | S | CF | CF | CF |
| Alkyl Benzene Sulfonic Acid | | 92 | 200/93 | CF | CF | S | S | S | S | S | S | S | S | A | U | S | S | S | CF | CF | A | CF |
| Allyl Alcohol | | All | U | U | 120/49 | U | A | S | S | S | S | S | S | U | S | S | S | S | A | A | A | CF |
| Allyl Chloride | | All | 80/27 | U | 150/65 | U | S | S | S | S | S | S | S | U | U | S | S | S | B | B | B | CF |
| Alpha Methyl Styrene | | 100 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF |
| Alum | | All | 250/121 | 180/82 | CF | S | S | S | S | S | S | S | S | S | U | A | S | S | B | B | B | CF |
| Aluminum Chloride | | All | 250/121 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | B | U |
| | | 1 | 250/121 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | B | U |
| Aluminum Chlorohydroxide | | 50 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF |
| Aluminum Fluoride | (*) | All | 80/27 | 80/27 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | U | B | U |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|-------------------------------|-------|----------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|--------------|---------------|-------|---------------------|---------------------|-------|--------------------|--------|----------|----|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiCar | Silcar-Silcar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Aluminum Hydroxide | | 100 | 180/82 | 180/82 | 200/93 | S | S | S | S | S | S | S | S | U | U | S | B | A | B | B |
| Aluminum Nitrate | | 10 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | S | U | S | S | A | B | CF | CF |
| | | 100 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | S | U | S | S | A | B | CF | CF |
| Aluminum Potassium Sulfate | | All | 250/121 | 180/82 | 225/107 | S | S | S | S | S | S | S | S | U | S | S | U | B | B | CF |
| Aluminum Sulfate | | See Alum | | | | | | | | | | | | | | | | | | |
| Ammonia (Wet) Anhydrous | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A |
| Ammonium Acetate | | 65 | 80/27 | U | 275/135 | S | S | S | S | S | S | S | S | U | U | A | B | B | CF | CF |
| Ammonium Bicarbonate | | 10 | 160/71 | 160/71 | 200/93 | S | S | S | S | S | S | S | S | S | S | S | B | B | CF | A |
| | | 50 | 160/71 | 160/71 | 200/93 | S | S | S | S | S | S | S | S | S | S | S | B | B | CF | A |
| | | Sat | U | U | 200/93 | S | S | S | S | S | S | S | S | S | S | S | S | S | CF | B |
| Ammonium Bifluoride | (*) | 100 | 150/65 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | U | U | U | B | B | U |
| Ammonium Bisulfite | | Sat | 150/65 | CF | 275/135 | CF | CF | CF | CF | S | S | S | S | S | S | S | B | B | A | A |
| Ammonium Carbonate | | All | 150/65 | 150/65 | 225/107 | U | A | S | S | S | S | S | S | U | S | S | B | B | B | A |
| Ammonium Chloride | | All | 210/99 | 180/82 | 225/107 | S | S | S | S | A | S | CF | U | S | U | U | U | B | A | A |
| Ammonium Citrate | | All | 150/65 | 150/65 | 275/135 | S | S | S | S | S | S | S | U | U | A | B | B | CF | B | |
| Ammonium Fluoride | (*) | All | 150/65 | 150/65 | 100/38 | S | S | S | S | CF | CF | CF | S | U | A | S | B | B | S | |
| Ammonium Hydroxide | | 5 | 150/65 | 150/65 | 200/93 | S | S | S | S | CF | CF | CF | U | S | S | A | A | A | B | |
| | | 10 | 150/65 | 150/65 | 200/93 | S | S | S | S | CF | CF | CF | U | S | S | A | A | A | B | |
| | | 20 | 150/65 | 150/65 | 175/79 | S | S | S | S | CF | CF | CF | U | S | S | A | A | A | B | |
| | | 28 | 100/38 | 100/38 | 175/79 | S | S | S | S | CF | CF | CF | U | S | S | A | A | A | B | |
| | | 100 | U | U | 175/79 | S | S | S | S | CF | CF | CF | U | S | S | B | B | B | U | |
| Ammonium Nitrate | | 25 | CF | CF | 275/135 | U | A | S | S | S | S | S | U | S | S | B | CF | B | A | |
| | | Sat | 150/65 | 180/82 | CF | U | A | S | S | S | S | S | U | S | S | B | CF | B | A | |
| Ammonium Persulfate | | All | 210/99 | 180/82 | 100/38 | S | S | S | S | S | S | S | U | S | S | B | B | B | A | |
| Ammonium Phosphate, dibasic | | 25 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | U | S | S | B | B | B | B | |
| | | 65 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | U | S | S | B | B | B | B | |
| | | All | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | U | S | S | B | B | B | B | |
| Ammonium Phosphate, monobasic | | 25 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | U | S | S | B | B | B | B | |
| | | 65 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | U | S | S | B | B | B | B | |
| | | All | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | U | S | S | B | B | B | B | |

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C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
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| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|----------------------------------|-------|---------|----------------------------------|---|---------|----------------------------------|--------|------------|----------|---------------------|------------|-------------|-------|-----|---------------------|----------------|------|--------------------|----------|--|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | |
| Ammonium Sulfate | | All | 250/121 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | A | A | | |
| Ammonium Thiocyanate | | 20 | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | S | U | S | A | B | A | B | | |
| Ammonium Thiosulfate | | 60 | 140/60 | CF | CF | S | S | S | S | S | S | S | U | U | A | A | B | A | A | | |
| Amyl Acetate | | All | 100/38 | CF | 150/65 | S | S | S | S | S | S | S | U | S | S | A | A | A | A | | |
| Amyl Alcohol | | All | 140/60 | 120/49 | 175/79 | S | S | S | S | S | S | S | S | A | S | A | A | A | B | | |
| Amyl Chloride | | 100 | 120/49 | CF | 100/38 | S | S | S | S | S | S | S | S | U | S | B | A | A | CF | | |
| Aniline | | 100 | U | U | 150/65 | S | S | S | S | S | S | S | U | U | A | B | B | A | A | | |
| Aniline Sulfate | | All | 210/99 | CF | 100/38 | S | S | S | S | S | S | S | U | U | A | B | B | CF | A | | |
| Antimony Trichloride | | 100 | CF | CF | 150/65 | CF | CF | CF | CF | CF | CF | CF | U | U | A | U | S | B | B | | |
| Aqua Regia (Chloronitric Acid) | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| Arsenic Acid | | All | 180/82 | CF | CF | S | S | S | S | S | S | S | S | S | S | B | B | B | A | | |
| Arsenious Acid | | 19Be | 180/82 | 150/65 | 100/38 | S | S | S | S | S | S | S | U | U | A | B | B | B | A | | |
| Barium Acetate | | All | 180/82 | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | CF | | |
| Barium Carbonate | | All | 180/82 | 180/82 | 275/135 | U | A | CF | CF | CF | CF | CF | U | U | A | B | B | B | B | | |
| Barium Chloride | | All | 210/99 | 180/82 | 275/135 | U | A | CF | CF | S | S | S | S | S | S | U | S | B | A | | |
| Barium Hydroxide | | 10 | 150/65 | 150/65 | 225/107 | U | A | CF | CF | S | S | S | S | S | S | B | B | S | B | | |
| | | All | 150/65 | 150/65 | CF | U | A | CF | CF | S | S | S | S | S | S | B | B | S | B | | |
| Barium Sulfate | | All | 250/121 | 180/82 | 275/135 | U | A | S | S | S | S | S | S | S | S | B | B | B | B | | |
| Barium Sulfide | | All | 180/82 | CF | 275/135 | U | A | S | S | S | S | S | S | S | S | B | B | CF | A | | |
| Beer | | All | 120/49 | U | 250/121 | S | S | S | S | S | S | S | S | S | U | A | A | A | A | | |
| Beet, Sugar Liquor | | Sat | 180/82 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | A | | |
| Benzaldehyde | | 100 | U | U | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| Benzene | | 10 | U | U | 200/93 | U | A | S | S | S | S | S | S | U | S | B | B | B | A | | |
| | | 100 | U | U | 180/82 | U | A | S | S | S | S | S | S | U | S | B | B | B | A | | |
| Benzene (5% in Kerosene) | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | | |
| Benzene, Ethyl Benzene | | 1/3:2/3 | 80/27 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| Benzene, Hydrochloric Acid (Wet) | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| Benzene Sulfonic Acid | | 50 | 150/65 | 150/65 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | | |

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C/F for mech seal and elas. above:
 (1) 50F
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| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | | Vertical Pumps | | | | |
|--------------------------|-------|--------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|--------------|---------------|-------|---------------------|---------------------|----------------|--------------------|--------|----------|----|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiCar | Silcar-Silcar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| | | 75 | 150/65 | 150/65 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B |
| | | 100 | 150/65 | 150/65 | 75/24 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B |
| Benzoic Acid | | Sat | 210/99 | 180/82 | 200/93 | U | A | S | S | S | S | S | S | U | S | B | B | A | A | |
| Benzyl Alcohol | | All | 80/27 | U | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Benzyl Chloride | | 100 | U | U | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Black Liquor (Pulp Mill) | | All | 180/82 | CF | 230/110 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B |
| Bleach Liquor(Pulp Mill) | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B |
| Blood Sugar | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | A |
| Boiler Wash Down | | All | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | B | A | A |
| Borax | | 100 | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | S | S | S | S | A | A | B | B |
| Boric Acid | | All | 210/99 | 180/82 | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A |
| Brass Plating Solution | | All | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B |
| Brine | | All | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | S | S | S | S | S | B | A | A |
| Bromic Acid | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | U | U |
| Bromine Liquid | | 100 | U | U | U | | | | | | | | | | | | | | | |
| Bromine, Wet Gas | | 100 | 100/38 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | U | A |
| Bunker C Fuel Oil | | 100 | 220/104 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF |
| Butadiene | | All | CF | CF | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | A |
| 2-Butoxyethanol | | 100 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A |
| 2,2-Butoxyethoxyethanol | | 100 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | B |
| Butyl Acetate | | 100 | 80/27 | U | 175/79 | S | S | S | S | S | S | S | U | U | A | B | A | A | A | |
| Butyl Benzyl Phthalate | | 100 | 210/99 | CF | 175/79 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | B | A |
| Butyl Carbitol | | 100 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF |
| Butyl Hypochlorite | | 98 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Butylene Glycol | | 100 | 180/82 | CF | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | B | A |
| Butylene Oxide | | 100 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Butyric Acid | | 25 | 210/99 | CF | 100/38 | S | S | S | S | S | S | S | U | A | U | B | B | A | A | |
| | | 50 | 210/99 | CF | 100/38 | S | S | S | S | S | S | S | U | A | U | B | B | A | A | |
| | | 100 | 120/49 | CF | CF | S | S | S | S | S | S | S | U | A | U | B | B | A | A | |
| Cadmium Chloride | | All | 210/99 | 180/82 | CF | U | A | S | S | S | S | S | U | U | A | CF | CF | B | CF | |
| Cadmium Cyanide Plt Bath | | All | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B |
| Calcium Bisulfite | | All | 210/99 | 180/82 | 100/38 | S | S | S | S | S | S | S | U | S | S | B | A | A | A | |

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| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--------------------------------|-------|--------|----------------------------------|---|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------|-------|---------------------|----------------|------------------------|--------------------|------|--------|----------|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium |
| Calcium Carbonate | | All | 180/82 | 180/82 | 225/107 | U | A | S | S | S | S | S | S | S | S | B | B | CF | B | |
| Calcium Chlorate | | All | 210/99 | 180/82 | 200/93 | CF | CF | CF | CF | S | S | S | U | U | A | CF | CF | CF | CF | |
| Calcium Chloride | | All | 210/99 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | S | S | S | S | B | A | A | |
| Calcium Hydroxide | | 15 | 150/65 | 150/65 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | A | B | B | B | |
| | | 25 | 150/65 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | A | B | B | B | |
| | | 100 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | A | B | B | B | |
| Calcium Hypochlorite | (**) | All | 180/82 | 180/82 | U | U | A | S | S | CF | CF | CF | S | S | U | U | U | B | A | |
| Calcium Nitrate | | All | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | S | S | S | U | U | B | B | |
| Calcium Sulfate | | All | 210/99 | 180/82 | 275/135 | U | A | S | S | S | S | S | U | U | A | B | B | B | A | |
| Calcium Sulfite | | All | 210/99 | 180/82 | 100/38 | U | A | S | S | S | S | S | S | S | S | B | B | B | A | |
| Cane, Sugar Liquor | | Sat | 180/82 | CF | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | CF | CF | |
| Caprylic Acid | | All | 210/99 | CF | 100/38 | S | S | S | S | S | S | S | U | S | B | B | A | A | | |
| Caramel | | 100 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | |
| Carbon Disulfide | | 100 | U | U | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | |
| Carbon Tetrachloride | | 100 | 180/82 | CF | 175/79 | U | A | S | S | S | S | S | S | S | S | S | B | A | B | |
| Carbonic Acid | | All | CF | CF | 150/65 | S | S | S | S | S | S | S | S | S | S | A | A | B | B | |
| Carboxyethyl Cellulose | | 10 | 150/65 | 150/65 | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | B | A | CF | CF | |
| Carboxymethyl Cellulose | | 10 | CF | CF | 100/38 | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | B | A | CF | CF | |
| Carbowax (Polyethylene Glycol) | | 100 | 180/82 | 150/65 | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | A | A | A | A | |
| Cascade Detergent | | All | 180/82 | 180/82 | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | |
| Castor Oil | | 100 | 160/71 | 160/71 | 250/121 | S | S | S | S | S | S | S | U | S | A | A | A | A | | |
| Chlorinated Wax | | All | 180/82 | CF | 150/65 | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | U | U | A | CF | |
| Chlorine, Wet Gas | | 100 | 220/104 | 180/82 | U | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | B | A | B | A | |
| Chlorine Dioxide | | All | 180/82 | CF | CF | U | A | S | S | S | CF | CF | A | U | U | U | U | B | A | |
| Chlorine Water | | Sat | 180/82 | CF | U | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | U | S | B | A | |
| Chloroacetic Acid | | 10 | 120/49 | CF | 150/65 | U | A | S | S | S | S | S | U | A | U | U | U | B | A | |
| | | 25 | 100/38 | CF | 100/38 | U | A | S | S | S | S | S | U | A | U | U | U | B | A | |
| | | 50 | 100/38 | CF | 100/38 | U | A | S | S | S | S | S | U | A | U | U | U | C | B | |
| Chloroacetic Acid, Glacial | | All | U | U | 100/38 | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | U | U | C | B | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--|-------|--------------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|---------------|---------------|-------|---------------------|---------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SilCar | SilCar-SilCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Chlorobenzene | | 100 | 80/27 | U | 200/93 | U | A | S | S | S | S | S | S | U | S | B | B | B | A | |
| Chloroform | | 100 | U | U | 185/85 | U | A | S | S | S | S | S | A | U | U | B | B | B | A | |
| N-Chloro O-Tolyl (Insecticide Emulsion) | | 10 | 120/49 | CF | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | B | B | B | CF | |
| Chloropyridine | | 100 | 120/49 | U | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | A | A | B | B | |
| Chlorosulfonic Acid | | 100 | U | U | 75/24 | S | S | S | S | CF | CF | CF | U | U | U | U | U | S | S | |
| Chrome Bath | | All | 120/49 | 120/49 | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | U | B | A | U | |
| Chromic Acid | | 5 | 150/65 | 150/65 | 75/24 | S | S | CF | S | A | B | B | U | U | A | U | S | A | B | |
| | | 10 | 150/65 | 150/65 | 75/24 | S | S | CF | S | A | B | B | U | U | A | U | S | A | B | |
| | | 15 | 150/65 | 120/49 | 75/24 | S | S | CF | S | A | B | B | U | U | A | U | S | A | B | |
| | | 20 | 150/65 | 120/49 | U | S | S | CF | S | A | B | B | U | U | A | U | S | A | B | |
| | | 30 | U | U | U | | | | | | | | | | | | | | | |
| | | 45 | U | U | U | | | | | | | | | | | | | | | |
| Chromic Fluoride | | All | CF | CF | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | U | U | B | CF | |
| Chromium Plate (with Sulfuric Acid-NR) | | All | 130/54 | 130/54 | CF | CF | CF | CF | S | CF | CF | CF | CF | CF | CF | S | A | B | B | |
| Chromium Sulfate | | All | 210/99 | 180/82 | 100/38 | U | A | S | S | S | S | S | U | U | A | U | B | B | CF | |
| Citric Acid | | All | 210/99 | 150/65 | 225/107 | S | S | S | S | S | S | S | S | S | S | B | A | A | B | |
| Cobalt Citrate | | 12 | 180/82 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | |
| Coconut Oil | | All | 200/93 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | B | A | A | |
| Copper Acetate | | All | CF | CF | 200/93 | S | S | S | S | S | S | S | U | S | S | B | B | B | CF | |
| Copper Chloride | | All | 250/121 | 180/82 | 225/107 | U | A | S | S | A | U | U | S | S | U | U | U | B | B | |
| Copper Cyanide | | All | 210/99 | 180/82 | 225/107 | S | CF | S | S | S | S | S | S | S | S | B | B | B | B | |
| Copper Cyanide Plating Bath | | All | 160/71 | 160/71 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | |
| Copper Cyanide, Potassium Cyanide, Potassium Hydroxide | | 8:3:2 oz/gal | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | |
| Copper Fluoroborate | | 40 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | CF | |
| Copper Fluoride | | Sat | CF | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | CF | |
| Copper Matte Dipping Bath | | All | 200/93 | 180/82 | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | S | B | |
| Copper Nitrate | | All | 210/99 | 180/82 | 210/99 | S | S | S | S | S | S | S | S | U | S | B | A | A | A | |

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 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3) 125F
 (4) 150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|----------------------------|-------|--------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------|-------------|-------|---------------------|---------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Copper Plating Solution | | All | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | B | A | A | | |
| Copper Sulfate | | All | 250/121 | 180/82 | 250/121 | S | S | S | S | S | S | S | S | S | S | B | A | A | A | | |
| Corn Oil | | All | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | A | CF | CF | CF | | |
| Corn Starch | | Slu | 210/99 | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Corn Sugar | | All | 180/82 | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | CF | | |
| Cottonseed Oil | | All | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | A | CF | CF | CF | | |
| Crude Oil Sour/Sweet | | 100 | 250/121 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | A | A | CF | A | | |
| Cumene | | 100 | 120/49 | 80/27 | CF | U | A | S | S | S | S | S | S | U | S | B | B | B | B | | |
| Cupric Chloride | | 5 | 250/121 | 180/82 | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | B | B | | |
| | | 50 | 250/121 | 180/82 | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | B | B | | |
| Cyclohexane | | 100 | 150/65 | CF | 175/79 | S | S | S | S | S | S | S | S | U | S | B | B | B | B | | |
| Cyclohexanol | | All | CF | CF | 200/93 | S | S | S | S | S | S | S | S | U | S | A | A | A | CF | | |
| Cyclohexanone | | 100 | CF | CF | 125/52 | S | S | S | S | S | S | S | S | U | S | B | B | B | CF | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Deionized Water | | 100 | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | | |
| Demineralized Water | | 100 | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | | |
| Desmut | | 10 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | U | | |
| Detergents,Organic pH 9,11 | | All | 180/82 | 160/71 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | A | | |
| Detergents,Organic pH 12 | | 100 | 180/82 | 160/71 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | A | | |
| Detergents,Sulfonated | | 100 | CF | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Diacetone Alcohol (Acetol) | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | | |
| Diallylphthalate | | All | 210/99 | 150/65 | 150/65 | S | S | S | S | S | S | S | S | U | U | S | A | CF | CF | | |
| Di-Ammonium Phosphate | | 65 | 210/99 | 180/82 | 275/135 | S | S | S | S | S | S | S | S | U | S | CF | CF | A | CF | | |
| Dibutyl Ether | | 100 | 120/49 | CF | 125/52 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Dibutyl Sebacate | | All | 150/65 | CF | CF | S | S | S | S | S | S | S | S | U | S | B | A | CF | CF | | |
| Dibutylphthalate | | All | 180/82 | CF | CF | S | S | S | S | S | S | S | S | U | U | A | A | A | CF | | |
| Dichlorobenzene (Ortho) | | 100 | 100/38 | U | 180/82 | U | A | S | S | S | S | S | S | U | S | B | B | A | A | | |
| Dichloroethane | | 100 | U | U | 185/85 | U | A | S | S | S | S | S | S | U | S | B | A | CF | CF | | |
| Dichloroethylene | | 100 | U | U | 185/85 | U | A | S | S | S | S | S | S | U | U | B | B | B | A | | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--|-------|-------------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------------|-------|---------------------|------------------------|-------|--------------------|--------|----------|----|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Dichloromethane | | 100 | U | U | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | |
| 2,4 Dichlorophenoxyacetic Acid | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | A | CF |
| Dichloropropane | | 100 | 80/27 | U | 185/85 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Dichloropropene | | 100 | U | U | 185/85 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Diesel Fuel | | 100 | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | A | A | B | B | |
| Diethanolamine | | 100 | 120/49 | CF | 150/65 | S | S | S | S | S | S | S | U | U | A | A | A | A | A | |
| Diethylamine | | 100 | U | U | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | |
| Diethylbenzene | | 100 | 150/65 | U | 185/85 | S | S | S | S | S | S | S | U | S | B | A | A | A | A | |
| Diethyl Carbonate | | 100 | 80/27 | U | 100/38 | S | S | S | S | S | S | S | U | U | A | A | A | A | A | |
| Diethylene Glycol | | 100 | 210/99 | 180/82 | 275/135 | S | S | S | S | S | S | S | S | S | A | A | B | A | A | |
| Diethylene Glycol N-Butyl Ester | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | A | A | |
| Diethylene Triamine | | 10 | CF | CF | 120/49 | S | S | S | S | S | S | S | U | U | A | A | A | A | CF | |
| Diethylhexyl Phosphoric Acid (in Kerosene) | | 20 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | A | |
| Di-Isobutyl Ketone | | 100 | 120/49 | U | CF | U | A | S | S | S | S | S | U | U | A | A | A | A | CF | |
| Di-Isobutylene | | 100 | 100/38 | 80/27 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| Di-Isobutyl Phthalate | | 100 | 150/65 | CF | 175/79 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| Di-Isopropanolamine | | 100 | 120/49 | 100/38 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | A | |
| Dimethyl Formamide | | 100 | U | U | 100/38 | S | S | S | S | S | S | S | U | U | A | A | A | A | CF | |
| Dimethyl Ketone | | See Acetone | | | | | | | | | | | | | | | | | | |
| Dimethyl Phthalate | | 100 | 180/82 | CF | 100/38 | S | S | S | S | S | S | S | U | U | A | A | CF | CF | CF | |
| Dimethyl Sulfide | | 100 | CF | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | B | B | B | B | |
| 2,2-Dimethyl Thiazolidine | | 1 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Diocetyl Phthalate | | 100 | 210/99 | 150/65 | 175/79 | S | S | S | S | S | S | S | S | S | A | CF | CF | CF | CF | |
| DMA #4 | | All | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| DMA #6 | | All | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Diphenyl Oxide | | 100 | 100/38 | U | CF | S | S | S | S | S | S | S | S | S | B | CF | B | A | A | |
| Dipropylene Glycol | | 100 | 210/99 | 150/65 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | CF | CF | |
| Distilled Water | | 100 | 180/82 | 180/82 | 175/79 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | A | |
| Divinylbenzene | | 100 | 120/49 | U | 175/79 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Dodecyl Alcohol | | 100 | CF | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| Dodecene | | 100 | 180/82 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Dodecyl Benzene Sulfonic Acid | | All | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | |
| Dowfax 2A1 Surfactant | | 45 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | CF | CF | CF | |
| Dowtherm A | | 100 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | B | A | |
| Electrosol | | 5 | 150/65 | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |

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C/F for mech seal and elas. above:
(1) 50F
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| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|--|-------|--------------------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------|-------------|-------|---------------------|------------------------|-------|--------------------|--------|----------|----|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Epichlorohydrin | | 100 | CF | U | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | CF |
| Esteron 99 Herbicide | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | CF | A | U |
| Esters, Fatty Acids | | 100 | 180/82 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | | A | CF | CF | CF | |
| Ethanol | | See Alcohol, Ethyl | | | | | | | | | | | | | | | | | | | |
| Ethanolamine | | 100 | 90/32 | U | CF | S | S | S | S | S | S | S | U | S | S | | A | A | CF | CF | |
| Ethyl Acetate | | 100 | CF | U | 150/65 | S | S | S | S | S | S | S | U | U | A | | A | A | A | CF | |
| Ethyl Acrylate | | 100 | CF | U | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Ethyl Alcohol | | See Alcohol, Ethyl | | | | | | | | | | | | | | | | | | | |
| Ethyl Benzene | | 100 | 100/38 | CF | 185/85 | S | S | S | S | S | S | S | U | S | | B | A | A | A | | |
| Ethyl Bromide | | All | CF | U | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Ethyl Cellosolve | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | |
| Ethyl Chloride | | 100 | CF | U | 100/38 | S | S | S | S | S | S | S | S | S | S | A | A | B | A | | |
| Ethyl Ether | | 100 | U | U | 120/49 | U | A | S | S | S | S | S | U | S | S | A | A | B | A | | |
| Ethylene Chlorohydrin | | 100 | 100/38 | U | CF | U | A | S | S | S | S | S | U | S | | B | B | A | A | | |
| Ethylene Dichloride | | 100 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Ethylene Glycol | | All | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | S | S | A | A | B | CF | | |
| Ethylene Glycol Monobutyl Ether | | 100 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | | |
| Ethylenediamine | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF |
| Ethyl Sulfate | | 100 | 100/38 | 100/38 | 100/38 | U | A | S | S | S | S | S | U | U | A | B | B | B | CF | | |
| Fatty Acids | | All | 250/121 | 150/65 | 275/135 | S | S | S | S | S | S | S | U | S | | B | A | A | A | | |
| Ferric Chloride | | All | 210/99 | 180/82 | 275/135 | U | A | S | S | S | CF | CF | S | S | U | U | U | U | A | | |
| Ferric Chloride:Ferrous Chloride | | 5:20 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | S | A | | |
| Ferric Chloride:Ferrous Chloride:Hydrochloric Acid | | 48:0.2:0.2 | 220/104 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | | |
| Ferric Chloride:Hydrochloric Acid | | 29:18:5 | 220/104 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | B | U | | |
| Ferric Nitrate | | 100 | CF | CF | 275/135 | S | S | S | S | S | S | S | S | S | S | B | A | B | A | | |
| Ferric Sulfate | | All | 210/99 | 180/82 | 275/135 | S | S | S | S | S | S | S | S | S | S | B | A | B | A | | |
| Ferrous Chloride | | All | 210/99 | 180/82 | 275/135 | S | S | S | S | A | CF | CF | U | U | A | U | U | B | A | | |
| Ferrous Chloride:Ferric Chloride | | 20:5 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | S | A | | |
| Ferrous Nitrate | | All | 210/99 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | U | CF | B | A | B | A | | |

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(*)-VR-1V Required
(**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
(1) 50F
(2) 70F
(3)125F
(4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--------------------------|-------|----------------------|----------------------------------|---|---------|----------------------------------|--------|------------|----------|---------------------|---------------|---------------|-------|-----|---------------------|----------------|------|--------------------|----------|--|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SilCar | SilCar-SilCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | |
| Ferrous Sulfate | | All | 210/99 | 180/82 | 275/135 | S | S | S | S | A | CF | CF | S | U | S | U | B | B | B | | |
| Fertilizer, URAN | | All | 150/65 | 150/65 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | | |
| Fertilizer, 8-8-8 | | All | 150/65 | 150/65 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | | |
| Fluoboric Acid | (*) | All | 210/99 | 150/65 | 75/24 | S | S | S | S | S | S | S | U | S | S | S | B | A | U | | |
| Fluoride Salts:HCL | (*) | 30:10 | 120/49 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | | |
| Fluosilicic Acid | (*) | 10 | 180/82 | 150/65 | 125/52 | U | A | S | S | CF | CF | CF | S | S | S | CF | CF | CF | S | | |
| | | 25 | 100/38 | 100/38 | 125/52 | U | A | S | S | CF | CF | CF | S | S | S | CF | CF | CF | S | | |
| | | 35 | 100/38 | 100/38 | CF | U | A | S | S | CF | CF | CF | S | S | S | CF | CF | CF | S | | |
| Formaldehyde | | All | 150/65 | CF | 150/65 | U | A | S | S | S | S | S | U | S | S | B | B | B | CF | | |
| Formic Acid | | 10 | 180/82 | 150/65 | 120/49 | S | S | S | S | S | S | S | U | A | U | S | B | A | S | | |
| | | 50 | 120/49 | CF | CF | S | S | S | S | S | S | S | U | A | U | S | B | A | S | | |
| | | 88 | CF | CF | 120/49 | S | S | S | S | S | S | S | U | A | U | S | B | A | S | | |
| | | 100 | CF | CF | 100/38 | S | S | S | S | S | S | S | U | A | U | S | B | A | S | | |
| Freon 11 | | 100 | 100/38 | U | 75/24 | S | S | S | S | CF | S | S | U | U | U | S | A | A | A | | |
| Freon 12 | | 100 | 100/38 | U | 75/24 | S | S | S | S | CF | S | S | U | U | U | S | A | A | A | | |
| Fuel Oil | | 100 | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | U | S | A | A | A | A | A | | |
| Furfural | | 100 | U | U | 100/38 | S | S | S | S | S | S | S | U | U | A | B | B | B | A | | |
| Furfuryl Alcohol | | 100 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Galecron 4EC Insecticide | | 100 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | B | B | | |
| Gasoline, Leaded | | 100 | 180/82 | 150/65 | 250/121 | S | S | S | S | S | S | S | U | S | A | A | A | A | B | | |
| Gluconic Acid | | 50 | CF | CF | 120/49 | S | S | S | S | S | S | S | U | U | A | U | B | B | A | | |
| Glucose | | 100 | 180/82 | CF | 275/135 | S | S | S | S | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Glutaraldehyde | | 50 | 120/49 | 120/49 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | | |
| Glutaric Acid | | 50 | 120/49 | CF | CF | S | S | S | S | S | S | S | U | S | CF | CF | B | CF | | | |
| Glycerine | | 100 | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | S | B | B | B | B | B | | |
| Glycol, Ethylene | | See Ethylene Glycol | | | | | | | | | | | | | | | | | | | |
| Glycol, Propylene | | See Propylene Glycol | | | | | | | | | | | | | | | | | | | |
| Glycolic Acid | | 70 | 100/38 | CF | 100/38 | S | S | S | S | S | S | S | U | U | A | A | CF | CF | B | | |

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 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|-----------------------------------|-------|--------|----------------------------------|--|---------|----------------------------------|--------|------------|----------|---------------------|---------------|---------------|-------|---------------------|---------------------|----------------|--------------------|--------|----------|----|----|----|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SilCar | Silcar-Silcar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | | |
| Glyoxal | | 40 | 100/38 | CF | 125/52 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | | |
| Gold Plating Solution | | All | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF |
| Grain Ethanol | | 10 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | A |
| Heptane | | 100 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | S | U | S | A | A | A | A | A | A | |
| Herbicides | | All | 120/49 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | CF |
| Hexane | | 100 | 160/71 | CF | 175/79 | S | S | S | S | S | S | S | S | U | S | A | A | A | A | A | A | |
| Hexamethylene Tetramine | | 40 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF |
| Hexylene Glycol, Alcohol | | 100 | CF | CF | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A |
| Hydraulic Fluid | | 100 | 180/82 | CF | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF |
| Hydrazine | | 100 | U | U | U | | | | | | | | | | | | | | | | | |
| Hydriodic Acid | | 40 | 150/65 | 150/65 | CF | S | S | S | S | S | CF | CF | U | U | A | U | U | B | A | A | A | |
| Hydrobromic Acid | | 18 | 180/82 | 180/82 | 150/65 | S | S | S | S | S | CF | CF | U | U | A | U | U | B | A | A | A | |
| | | 25 | 180/82 | 180/82 | 100/38 | S | S | S | S | S | CF | CF | U | U | A | U | U | S | B | A | A | |
| | | 48 | 150/65 | 150/65 | 100/38 | S | S | S | S | S | CF | CF | U | U | A | U | U | S | B | A | A | |
| | | 62 | 100/38 | 100/38 | CF | S | S | S | S | S | CF | CF | U | U | A | U | U | S | B | A | A | |
| Hydrochloric Acid | (3) | 1 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | S | B | U | U | A | U | A | U | |
| | (3) | 10 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | U | B | U | U | A | U | A | U | |
| | (3) | 15 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | U | B | U | U | CF | U | A | U | |
| | (3) | 20 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | U | B | U | U | CF | U | A | U | |
| | (3) | 32 | 160/71 | 150/65 | 150/65 | S | S | CF | S | A | B | B | A | U | B | U | U | CF | U | A | U | |
| | (3) | 36.5 | 110/43 | 100/38 | 150/65 | S | S | CF | S | A | B | B | A | U | B | U | U | CF | U | A | U | |
| | (3) | 37 | 110/43 | 100/38 | 150/65 | S | S | CF | S | A | B | B | A | U | B | U | U | CF | U | A | U | |
| Hydrochloric Acid & Free Chlorine | | All | 195/90 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | CF | U |
| Hydrocyanic Acid | | All | 210/99 | 180/82 | 100/38 | U | A | S | S | S | S | S | S | S | S | B | B | B | CF | A | A | |
| Hydrofluoric Acid | (*) | 10 | 150/65 | 150/65 | 75/24 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | B | B | U | A | A | |
| | | 20 | 100/38 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | B | B | U | A | A | |
| Hydrofluosilicic Acid | (*) | 10 | 180/82 | 150/65 | 125/52 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | B | U | A | A | |
| | | 25 | 100/38 | 100/38 | 125/52 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | B | U | A | A | |
| | | 35 | 100/38 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | B | U | A | A | |
| Hydrogen Bromide, Wet Gas | | 100 | 180/82 | 180/82 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | CF | A | A | A | |
| Hydrogen Chloride, Wet Gas | | 100 | 230/110 | 180/82 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | B | B | CF | A | A | |
| Hydrogen Peroxide | (**) | 30 | 150/65 | 150/65 | 75/24 | S | S | S | S | CF | CF | S | S | U | S | B | B | B | B | A | A | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|------------------------------|-------|--------|----------------------------------|---|----------------------------------|-----------|--------|------------|----------|---------------------|--------------|---------------|-------|-----|------------------------|-------|------|--------------------|----------|----|---|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiCar | Silcar-Silcar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | |
| Hydrogen Sulfide | | 5 | 350/177 | 180/82 | CF | S | S | S | S | S | S | S | S | U | S | S | B | A | A | A | |
| | | 100 | CF | CF | CF | S | S | S | S | S | S | S | S | U | S | S | B | A | A | A | |
| Hydrosulfite Bleach | | All | 180/82 | 180/82 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | |
| Hydroxyacetic Acid | | 70 | 100/38 | CF | CF | S | S | S | S | S | S | S | U | U | U | | CF | CF | A | CF | |
| Hypochlorous Acid | (**) | 10 | 100/38 | 100/38 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B |
| | | 20 | CF | CF | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B |
| Hypophosphorous Acid | | 50 | 120/49 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | CF | |
| | | | | | | | | | | | | | | | | | | | | | |
| Insecticides | | All | 120/49 | CF | CF | S | S | S | S | S | S | S | U | U | A | | S | S | B | CF | |
| Iodine | | 100 | 150/65 | 150/65 | 200/93 | S | S | S | S | S | S | S | S | U | S | | S | S | B | U | |
| Iron Plating Solution | | 100 | 250/121 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | B | A | |
| Iron and Steel Cleaning Bath | | All | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | A | U | |
| Isodecanol | | 100 | 150/65 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | |
| Isopropyl Alcohol | | | See Alcohol, Isopropyl | | | | | | | | | | | | | | | | | | |
| Isopropyl Amine | | 100 | U | U | 125/52 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | B | |
| Isopropyl Myristate | | 100 | 230/110 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | CF | CF | |
| Isopropyl Palmitate | | 100 | 230/110 | 150/65 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | CF | CF | |
| | | | | | | | | | | | | | | | | | | | | | |
| Jet Fuel (JP-4) | | 100 | 140/60 | 140/60 | 275/135 | S | S | S | S | S | S | S | S | U | S | | A | A | A | A | |
| | | | | | | | | | | | | | | | | | | | | | |
| Kerosene | | 100 | 180/82 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | | A | A | A | A | |
| | | | | | | | | | | | | | | | | | | | | | |
| Lactic Acid | | All | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | S | S | | B | B | A | A | |
| | | | | | | | | | | | | | | | | | | | | | |
| Latex | | 100 | 120/49 | 120/49 | 275/135 | U | A | S | S | S | S | S | S | S | S | | A | CF | CF | CF | |
| | | | | | | | | | | | | | | | | | | | | | |
| Lauric Acid | | 100 | CF | CF | 275/135 | S | S | S | S | CF | CF | CF | U | U | A | | A | CF | CF | CF | |
| | | | | | | | | | | | | | | | | | | | | | |
| Lauroyl Chloride | | 100 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | A | B | CF | CF | |
| | | | | | | | | | | | | | | | | | | | | | |
| Lauryl Alcohol | | 100 | 180/82 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | A | CF | CF | CF | |
| Lauryl Chloride | | 100 | 210/99 | 150/65 | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | A | CF | CF | CF | |
| Lead Acetate | | All | 230/110 | CF | 225/107 | U | A | A | U | S | S | S | U | S | S | | B | B | A | A | |

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C/F for mech seal and elas. above:
(1) 50F
(2) 70F
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| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--|-------|--------|----------------------------------|--|---------|----------------------------------|--------|------------|----------|---------------------|---------------|---------------|-------|---------------------|---------------------|----------------|------|--------------------|----------|--|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SilCar | SilCar-SilCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | |
| Lead Nitrate | | All | CF | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | | |
| Levulinic Acid | | All | 230/110 | CF | 250/121 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | CF | | |
| Linseed Oil | | 100 | 230/110 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | A | A | A | A | | |
| Lithium Bromide | | Sat | 250/121 | 180/82 | 275/135 | S | S | S | S | CF | CF | CF | S | U | S | A | A | A | CF | | |
| Lithium Carbonate | | All | 180/82 | 180/82 | CF | U | A | A | U | S | CF | CF | U | U | A | B | B | B | A | | |
| Lithium Chloride | | Sat | 250/121 | 180/82 | 275/135 | U | A | A | U | S | CF | CF | U | U | A | U | A | CF | A | | |
| Lithium Hydroxide | | Sat | 180/82 | 180/82 | 225/107 | U | A | A | U | S | CF | CF | U | U | A | B | B | CF | CF | | |
| Lithium Hypochlorite | (**) | All | 180/82 | 180/82 | CF | U | A | A | U | S | CF | CF | U | U | A | U | U | B | A | | |
| Magnesium Bisulfite | | All | 210/99 | 180/82 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | | |
| Magnesium Carbonate | | All | 180/82 | 180/82 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | | |
| Magnesium Chloride | | All | 250/121 | 180/82 | 275/135 | U | A | A | U | U | S | S | S | S | B | B | A | A | | | |
| Magnesium Hydroxide | | 100 | 210/99 | 180/82 | 225/107 | U | A | A | U | S | S | S | S | S | B | B | B | CF | | | |
| Magnesium Nitrate | | All | 210/99 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | | |
| Magnesium Phosphate | | All | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | S | S | B | | | |
| Magnesium Sulfate | | All | 250/121 | 180/82 | 275/135 | U | A | A | U | S | S | S | S | S | B | B | B | A | | | |
| Maleic Acid | | 100 | 210/99 | 180/82 | 175/79 | U | A | A | U | S | S | S | U | S | B | B | A | A | | | |
| Mercaptoacetic Acid | | All | 80/27 | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| Mercuric Chloride | | 100 | 210/99 | 180/82 | 275/135 | U | A | A | U | S | S | S | S | S | U | U | S | B | | | |
| Mercury | | 100 | 250/121 | 150/65 | CF | U | A | A | U | S | S | S | S | S | A | A | B | A | | | |
| Methacrylic Acid | | 100 | CF | CF | CF | S | S | S | S | S | S | S | U | S | CF | CF | CF | CF | | | |
| Methallyl Chloride (in solution w/HCl) | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | U | U | A | CF | | | |
| Methyl Alcohol (Methanol) | | 5 | 120/49 | 120/49 | 175/79 | S | S | S | S | S | S | S | U | S | A | A | S | A | | | |
| | | 10 | 90/32 | U | 175/79 | S | S | S | S | S | S | S | U | S | A | A | S | A | | | |
| | | 50 | CF | U | 175/79 | S | S | S | S | S | S | S | U | S | A | A | S | A | | | |
| | | 80 | CF | U | 175/79 | S | S | S | S | S | S | S | U | S | A | A | S | A | | | |
| | | 100 | CF | U | 150/65 | S | S | S | S | S | S | S | U | S | A | A | S | A | | | |

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C/F for mech seal and elas. above:
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| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|--------------------------|-------|--------------------------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------|-------|-------|---------------------|-----|------------------------|--------------------|------|--------|----------|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar | SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium |
| Methyl Cellosolve | | All | CF | CF | CF | S | S | S | S | S | S | S | U | U | A | A | A | CF | CF | | |
| Methylene Chloride | | 100 | U | U | 100/38 | S | S | S | S | S | S | S | U | U | A | B | B | A | A | | |
| Methyl Ethyl Ketone | | 100 | CF | U | 175/79 | S | S | S | S | S | S | S | Y | S | S | B | B | B | A | | |
| Methyl Isobutyl Carbitol | | 100 | CF | CF | 75/24 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | | |
| Methyl Isobutyl Ketone | | 100 | 100/38 | U | 175/79 | S | S | S | S | S | S | S | U | U | A | B | B | B | A | | |
| Methyl Styrene (Alpha) | | See Alpha Methyl Styrene | | | | | | | | | | | | | | | | | | | |
| Mineral Oil | | 100 | 250/121 | 150/65 | 275/135 | S | S | S | S | S | S | S | U | S | A | A | CF | A | | | |
| Molybdenum Disulfide | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | CF | | |
| Monochloroacetic Acid | | See Chloroacetic Acid | | | | | | | | | | | | | | | | | | | |
| Monochlorobenzene | | See Chlorobenzene | | | | | | | | | | | | | | | | | | | |
| Monoethanolamine | | See Ethanolamine | | | | | | | | | | | | | | | | | | | |
| Monomethylhydrazine | | 100 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | | |
| Morpholine | | 100 | U | U | CF | S | S | S | S | S | S | S | U | U | A | CF | CF | CF | CF | | |
| Motor Oil | | All | 250/121 | 150/65 | 275/135 | S | S | S | S | S | S | S | U | S | A | A | CF | CF | | | |
| Muriatic Acid | | See Hydrochloric Acid | | | | | | | | | | | | | | | | | | | |
| Myristic Acid | | 100 | 250/121 | 150/65 | 250/121 | S | S | S | S | S | S | S | U | U | A | A | CF | CF | CF | | |
| Naphtha | | 100 | 210/99 | 180/82 | 275/135 | S | S | S | S | S | S | S | U | A | A | A | A | A | A | | |
| Naphthalene | | 100 | 210/99 | 180/82 | 225/107 | S | S | S | S | S | S | S | U | A | A | A | A | A | A | | |
| Neutralizer & Desmut | | All | 150/65 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | U | | |
| Nickel Chloride | | All | 210/99 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | S | A | A | | |
| Nickel Nitrate | | All | 210/99 | 180/82 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | | |
| Nickel Plating Solution | | All | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Nickel Sulfate | | All | 210/99 | 180/82 | 275/135 | S | S | S | S | S | S | S | S | S | B | B | B | B | | | |
| Nitric Acid | (2) | 5 | 180/82 | 150/65 | 150/65 | S | S | CF | S | A | B | B | A | U | B | A | B | B | B | | |
| | (2) | 10 | 150/65 | 120/49 | 120/49 | S | S | CF | S | A | B | B | A | U | B | A | B | B | B | | |
| | (2) | 20 | 120/49 | 120/49 | 75/24 | S | S | CF | S | A | B | B | A | U | B | A | B | B | B | | |
| | (2) | 25 | 100/38 | 100/38 | 75/24 | S | S | CF | S | A | B | B | A | U | B | A | B | B | B | | |
| Nitrobenzene | | 100 | 80/27 | U | 200/93 | U | A | A | U | S | S | S | U | U | A | A | A | B | A | | |
| Octanoic Acid | | 100 | 210/99 | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | Vertical Pumps | | | | | | |
|---|-------|--------|----------------------------------|--|---------|----------------------------------|--------|------------|----------|---------------------|------------|-------------|-------|---------------------|------------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Oil, Crude | | 100 | 250/121 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | B | A | A | A | |
| Oleic Acid | | 100 | 210/99 | CF | 275/135 | S | S | S | S | S | S | S | U | U | S | B | A | A | A | |
| Oleum (Fuming Sulfuric) | | 100 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | |
| Oleum Sulfates (Alpha) | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | U | |
| Olive Oil | | 100 | 250/121 | CF | 275/135 | S | S | S | S | S | S | S | U | S | A | CF | CF | CF | CF | |
| Oxalic Acid | | Sat | 120/49 | CF | 225/107 | U | A | CF | CF | CF | CF | CF | CF | CF | S | B | B | U | | |
| Ozone | | 2mg/l | 100/38 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| | | | | | | | | | | | | | | | | | | | | |
| Palmitic Acid | | 100 | 250/121 | CF | CF | S | S | S | S | S | S | S | U | S | A | A | CF | CF | CF | |
| Peanut Oil | | 100 | 180/82 | CF | CF | S | S | S | S | S | S | S | U | S | A | A | A | A | A | |
| Pentanedioic Acid | | 50 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Perchloric Acid | | 10 | 150/65 | 150/65 | CF | U | A | A | U | S | S | S | U | S | U | B | CF | A | A | |
| | | 30 | 100/38 | 100/38 | CF | U | A | A | U | S | S | S | U | S | U | B | CF | A | A | |
| Perchloroethylene | | 100 | 120/49 | U | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | A | |
| Peroxide Bleach | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | A | A | |
| Phenol (Carbolic Acid) | | 5 | 80/27 | U | 175/79 | U | A | A | U | S | S | S | U | S | A | A | A | A | A | |
| Phenol Sulfonic Acid | | All | 80/27 | CF | CF | S | S | S | S | S | S | U | U | S | CF | CF | CF | CF | CF | |
| Phosphoric Acid(Aerated) | (4) | 25 | 210/99 | 180/82 | 150/65 | S | S | CF | S | A | B | B | A | B | S | A | B | B | U | |
| | (4) | 50 | 210/99 | 180/82 | 150/65 | S | S | CF | S | A | B | B | A | B | S | A | B | B | U | |
| | (4) | 80 | 210/99 | 180/82 | 150/65 | S | S | CF | S | A | B | B | A | B | S | A | B | B | U | |
| | (4) | 85 | 210/99 | 180/82 | 125/52 | S | S | CF | S | A | B | B | A | B | S | A | B | B | U | |
| | (4) | 100 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | B | B | U | U | |
| Phosphoric Acid (Superphosphoric Acid) | | 105 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | U | U | |
| Phosphoric Acid (Polyphosphoric Acid) | | 115 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | U | U | |
| Phosphoric Acid:Hydrochloric Acid, Sat'd with Cl ₂ | | 15:9 | 210/99 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | |
| Phosphorous Acid | | 70 | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | CF | |
| Phosphorous Pentoxide | | 54 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | CF | CF | |
| Phosphorous Trichloride | | 100 | U | U | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | |
| Phthalic Acid | | All | 210/99 | CF | CF | S | S | S | S | S | S | U | U | S | B | B | B | B | B | |
| Pickling Acids:Sulfuric & Hydrochloric Acids | | All | CF | CF | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | |
| Picric Acid (Alcoholic) | | 10 | CF | U | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | A | A | |
| Platinum Plating Solution | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | |
| Polyethyleneimine | | All | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | CF | CF | |
| Potassium Aluminum Sulfate | | All | 250/121 | 180/82 | 275/135 | S | S | A | U | S | U | U | U | S | B | A | B | A | A | |
| Potassium Bicarbonate | | 10 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | U | S | A | B | B | A | A | |
| | | 50 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | U | S | B | B | B | A | A | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--|-------|--------|----------------------------------|--|---------|----------------------------------|--------|------------|----------|---------------------|------------|-------|-------|-------|---------------------|---------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Potassium Bromide | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | S | U | S | B | B | B | A | |
| Potassium Carbonate | | 10 | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | S | U | S | B | A | A | A | | |
| | | 14 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | U | S | B | A | A | A | | |
| | | 25 | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | S | U | S | B | A | A | A | | |
| | | 50 | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | S | U | S | B | A | A | A | | |
| | | Sat | CF | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | A | | |
| Potassium Chlorate | | 20 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | B | A | | |
| Potassium Chloride | | All | 210/99 | 180/82 | 275/135 | U | A | A | U | S | S | S | S | S | S | U | B | A | A | | |
| Potassium Dichromate | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | B | B | B | A | | |
| Potassium Ferricyanide | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | U | S | B | B | B | A | | |
| Potassium Ferrocyanide | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | U | S | B | B | B | A | | |
| Potassium Fluoride | | All | 180/82 | 180/82 | 150/65 | S | S | A | U | S | S | S | S | U | S | B | CF | B | A | | |
| Potassium Gold Cyanide | | 12 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Potassium Hydroxide | | 10 | 100/38 | CF | CF | S | S | A | U | S | U | U | U | S | S | B | B | B | B | | |
| | | 25 | 100/38 | CF | CF | S | S | A | U | S | U | U | U | S | S | B | B | B | B | | |
| | | 45 | 100/38 | CF | CF | S | S | A | U | S | U | U | U | S | S | B | B | B | S | | |
| | | Sat | CF | CF | 240/115 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | S | | |
| Potassium Hydroxide:Potassium Cyanide:Copper Cyanide | | 2:3:8 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | | |
| Potassium Nitrate | | All | 210/99 | 180/82 | 240/115 | S | S | A | U | S | S | S | U | U | S | A | A | A | A | | |
| Potassium Permanganate | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | U | U | S | S | S | B | CF | | |
| | | 5 | 210/99 | 180/82 | 225/107 | S | S | A | U | S | S | S | U | U | S | B | B | B | A | | |
| | | 10 | 210/99 | 180/82 | 175/79 | S | S | A | U | S | S | S | U | U | S | B | B | B | A | | |
| Potassium Persulfate | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | U | S | B | B | CF | CF | | |
| Potassium Pyrophosphate | | 60 | 150/65 | 130/54 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Potassium Sulfate | | All | 210/99 | 180/82 | 275/135 | U | A | A | U | S | S | S | S | S | S | CF | B | B | A | | |
| Propane | | 100 | 140/60 | 140/60 | 75/24 | S | S | S | S | S | S | S | S | U | S | A | A | CF | A | | |
| Propionic Acid | | 20 | 180/82 | 180/82 | 120/49 | S | S | S | S | S | S | S | U | U | S | S | B | B | A | | |
| | | 50 | 180/82 | 180/82 | 120/49 | S | S | S | S | S | S | S | U | U | S | S | B | B | A | | |
| | | 100 | 80/27 | U | 100/38 | S | S | S | S | S | S | S | U | U | S | S | B | B | A | | |
| Propylene Dichloride | | 100 | CF | CF | CF | S | S | S | S | S | S | S | U | U | S | B | A | B | A | | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|-------------------------------------|-------|--------|----------------------------------|---|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------|-------|-------|---------------------|-----|----------------------|--------------------|------|--------|----------|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar | SiCar | Viton | EPR | Per-Fluoro Elastomer | 316SS | C-20 | Hast C | Titanium |
| Propylene Glycol | | All | 210/99 | CF | 275/135 | S | S | S | S | S | S | S | S | S | U | S | B | CF | B | A | |
| Pulp Paper Mill Effluent | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | |
| Pyridine | | 100 | U | U | 125/52 | U | A | A | U | S | S | S | S | U | S | A | A | B | A | | |
| Red Liquor | | All | 180/82 | 150/65 | CF | U | A | CF | CF | CF | CF | CF | CF | S | S | S | A | CF | CF | CF | |
| Salicylic Acid | | All | 160/71 | CF | 150/65 | S | S | S | S | S | S | S | S | S | S | S | B | A | B | A | |
| Salt Brine | | 30 | 250/121 | 180/82 | 275/135 | S | S | S | S | S | S | S | S | S | S | S | S | B | A | A | |
| Sea Water | | All | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | S | S | S | S | B | B | A | A | |
| Selenious Acid | | All | 210/99 | 180/82 | CF | S | S | S | S | S | S | S | U | U | S | A | A | A | CF | | |
| Silicic Acid | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | B | A | A | | |
| Silver Nitrate | | All | 210/99 | 180/82 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | A | | |
| Silver Plating Solution | | All | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | | |
| Soaps | | All | CF | CF | 275/135 | S | S | S | S | S | S | S | S | S | S | A | A | A | A | | |
| Sodium Acetate | | All | 210/99 | CF | 225/107 | S | S | A | U | S | S | S | U | S | S | CF | CF | A | A | | |
| Sodium Alkyd Aryl Sulfonates | | All | 180/82 | 150/65 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Sodium Aluminate | | All | 160/71 | 120/49 | 225/107 | S | S | A | U | S | S | S | S | U | S | A | A | B | A | | |
| Sodium Benzoate | | 100 | 180/82 | 180/82 | 250/121 | S | S | A | U | S | S | S | S | U | S | B | CF | CF | A | | |
| Sodium Bicarbonate | | All | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | A | A | A | A | | |
| Sodium Bicarbonate:Sodium Carbonate | | 15:20 | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | A | A | B | A | | |
| Sodium Bifluoride | (*) | All | 120/49 | 120/49 | CF | S | S | A | U | S | S | S | U | S | S | CF | CF | CF | A | | |
| Sodium Bisulfate | | All | 210/99 | 180/82 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | B | | |
| Sodium Bisulfite | | Sat | 210/99 | 180/82 | 250/121 | S | S | A | U | S | S | S | S | S | S | CF | A | A | A | | |
| Sodium Borate | | Sat | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | B | A | A | A | | |
| Sodium Bromate | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | A | A | A | CF | | |
| Sodium Bromide | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | S | S | CF | CF | CF | A | | |
| Sodium Carbonate | | 10 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | A | A | A | A | | |
| | | 25 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | A | A | A | A | | |
| | | 32 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | B | A | A | A | | |

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C/F for mech seal and elas. above:
 (1) 50F
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 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|-------------------------------------|---------|-----------|----------------------------------|--|---------|----------------------------------|--------|------------|----------|---------------------|--------------|---------------|-------|-----|---------------------|----------------|------|--------------------|----------|--|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiCar | Silcar-Silcar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | | |
| | | 35 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | B | A | A | A | | |
| | | 50 | 180/82 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | B | A | A | A | | |
| Sodium Carbonate:Sodium Bicarbonate | | 20:15 | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | A | A | A | A | | |
| Sodium Chlorate | | 50 | 210/99 | 180/82 | 200/93 | U | A | A | U | S | S | S | S | S | S | B | B | B | B | | |
| | | Sat | CF | CF | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | | |
| Sodium Chlorate:Sodium Chloride | | 3.2M:3.4M | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | | |
| Sodium Chloride | | Sat | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | S | S | S | CF | CF | A | | |
| Sodium Chloride & Cl ₂ | | Sat | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | B | A | A | | |
| Sodium Chloride:Sodium Chlorate | | 3.4M:3.2M | 210/99 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | | |
| Sodium Chlorite | | 10 | 180/82 | 180/82 | CF | U | A | A | U | S | S | S | S | S | S | CF | CF | CF | A | | |
| | | 50 | 180/82 | 180/82 | CF | U | A | A | U | S | S | S | S | S | S | CF | CF | CF | A | | |
| Sodium Chromate | | 50 | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | A | A | A | A | | |
| Sodium Cyanide | | 6 | 210/99 | CF | 250/121 | U | A | A | U | S | S | S | S | S | S | U | A | CF | A | | |
| | | All | 210/99 | CF | CF | U | A | S | S | S | S | S | S | S | S | U | A | CF | A | | |
| Sodium Dichromate | | 100 | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | U | U | U | A | CF | A | CF | | |
| Sodium Diphosphate | | 100 | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | U | U | S | B | B | A | A | | |
| Sodium Dodecylbenzene Sulfonate | | 20 | 160/71 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | | |
| Sodium Ferricyanide | | All | 210/99 | CF | 275/135 | S | S | A | U | S | S | S | S | U | S | B | B | A | A | | |
| Sodium Ferrocyanide | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | U | S | B | B | A | A | | |
| Sodium Fluoride | (*) | All | 180/82 | 180/82 | 200/93 | S | S | A | U | S | S | S | U | S | S | U | S | A | A | | |
| Sodium Fluoro Silicate | (*) | All | 120/49 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | CF | | |
| Sodium Hexametaphosphate | | All | 180/82 | 180/82 | CF | U | A | A | U | S | S | S | U | U | S | B | B | B | B | | |
| Sodium Hydrosulfide | | All | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | U | U | S | B | B | CF | CF | | |
| Sodium Hydroxide | | 0.5 | 150/65 | 150/65 | 200/93 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| | | 1 | 150/65 | 150/65 | 200/93 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| | | 5 | 150/65 | 150/65 | 200/93 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| | | 10 | 150/65 | 150/65 | 215/101 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| | | 15 | 150/65 | 150/65 | 215/101 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| | | 25 | 150/65 | 150/65 | 225/107 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| | | 50 | 150/65 | 150/65 | 240/115 | S | S | S | CF | A | B | B | U | B | A | A | B | B | B | | |
| Sodium Hypochlorite (pH>11) | (**)(3) | 0.5 | 180/82 | 150/65 | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |
| | (**)(3) | 1 | 180/82 | 150/65 | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |
| | (**)(3) | 5-1/4 | 180/82 | 150/65 | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|--|----------|--------|----------------------------------|---|---------|----------------------------------|--------|------------|----------|---------------------|------------|-------|-------------|---------------------|-----|------------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| | (**) (3) | 10 | 180/82 | 150/65 | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |
| | (**) (3) | 15 | 180/82 | 150/65 | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |
| | (**) (3) | 18 | 180/82 | 150/65 | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |
| Sodium Hypochlorite,5% NaOH Scrubbing Cl2 ClO2 | (**) (3) | All | CF | CF | CF | S | S | S | CF | A | B | B | A | B | S | U | U | B | A | | |
| Sodium Lauryl Sulfate | | All | 160/71 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | | |
| Sodium Methoxide | | 40 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | A | A | B | | |
| Sodium Monophosphate | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | U | S | S | B | B | A | A | | |
| Sodium Nitrate | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | U | S | S | A | A | A | A | | |
| Sodium Nitrite | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | U | S | S | U | CF | CF | A | | |
| Sodium Peroxide | | All | CF | CF | CF | U | A | A | U | S | S | S | S | S | S | A | A | CF | CF | | |
| Sodium Persulfate | | 20 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | CF | | |
| Sodium Phosphate | | 10 | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | B | B | B | B | | |
| Sodium Polyacrylate, pH 9-10.5 | | 25 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | CF | CF | | |
| Sodium Silicate | | All | 210/99 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | S | S | A | A | B | A | | |
| Sodium Sulfate | | All | 210/99 | 180/82 | 275/135 | S | S | A | U | S | S | S | S | S | S | B | B | B | B | | |
| Sodium Sulfide | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | B | B | B | B | | |
| Sodium Sulfite | | All | 210/99 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | S | B | B | A | | |
| Sodium Tetraborate | | Sat | 180/82 | 180/82 | CF | S | S | A | U | S | S | S | S | S | S | A | CF | CF | CF | | |
| Sodium Thiocyanate | | 57 | 180/82 | 180/82 | 225/107 | S | S | A | U | CF | CF | CF | U | U | S | A | A | CF | CF | | |
| Sodium Thiosulfate | | All | 180/82 | 180/82 | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | A | | |
| Sodium Tripolyphosphate | | Sat | 210/99 | 180/82 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Sodium Xylene Sulfonate | | All | 160/71 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | | |
| Solder Plate | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | U | | |
| Solvent Composite-35% Xylene, 35% Kerosene, 30% Di- 2-Ethylhexyl, Phosphoric Acid | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | | |
| Solvent Extraction Solutions- 4% Trioctylphosphine Oxide, 4% Diethylhexyl Phosphoric Acid, 92% Kerosene | | All | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | | |
| Solvent Extraction Solutions- 3% Isodecanol, 6% Alamine 336, 91% Kerosene | | All | 180/82 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | | |
| Sorbitol Solutions | | All | 160/71 | CF | 175/79 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Soya Oil | | 100 | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | U | S | A | CF | CF | CF | | |
| Stannic Chloride | | All | 210/99 | 180/82 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | U | S | B | | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | Vertical Pumps | | | | | |
|-------------------------------------|-------|--------|----------------------------------|--|---------|----------------------------------|--------|------------|----------|---------------------|---------------|---------------|-------|---------------------|---------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SilCar | SilCar-SilCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Stannous Chloride | | All | 210/99 | 180/82 | 225/107 | S | S | A | U | S | S | S | S | U | S | U | B | B | B | |
| Stearic Acid | | All | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | U | U | S | B | A | A | A | |
| Styrene | | 100 | 100/38 | U | 185/85 | S | S | S | S | S | S | S | U | S | A | A | U | CF | | |
| Styrene Acrylic Emulsion | | All | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | A | | |
| Succinonitrile, Aqueous | | All | 100/38 | U | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | | |
| Sugar Beet, Liquor | | All | 180/82 | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Sugar Cane, Liquor | | All | 180/82 | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Sugar/Sucrose | | All | 210/99 | CF | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | CF | | |
| Sulfamic Acid | | 10 | 210/99 | 180/82 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| | | 25 | 150/65 | 150/65 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | | |
| Sulfanilic Acid | | All | 210/99 | 180/82 | CF | S | S | S | S | S | S | U | U | S | CF | CF | B | CF | | |
| Sulfated Detergents | | All | CF | CF | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | | |
| Sulfonated Detergents | | 100 | 180/82 | 160/71 | 275/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | | |
| Sulfate/Sulfite Liquors (Pulp Mill) | | All | 200/93 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | A | A | | |
| Sulfur Dioxide, Wet | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | A | A | CF | | |
| Sulfur, Wettable, Fungicide | | 100 | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | | |
| Sulfur Trioxide | | 100 | 210/99 | 180/82 | CF | U | A | A | U | S | S | S | U | S | B | B | B | U | | |
| Sulfuric Acid | (3) | 1 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | U | B | A | B | U | | |
| | (3) | 5 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | U | B | A | B | U | | |
| | (3) | 10 | 220/104 | 180/82 | 200/93 | S | S | CF | S | A | B | B | A | U | B | A | B | U | | |
| | (2) | 25 | 220/104 | 180/82 | 175/79 | S | S | CF | S | A | B | B | A | U | B | A | B | U | | |
| | (4) | 50 | 210/99 | 180/82 | 175/79 | S | S | CF | S | A | B | B | A | U | B | U | A | U | | |
| | (4) | 70 | 180/82 | 180/82 | 175/79 | S | S | CF | S | A | B | B | A | U | B | U | A | U | | |
| | (4) | 75 | 120/49 | 100/38 | 150/65 | S | S | CF | S | A | B | B | A | U | B | U | A | U | | |
| | (4) | 80 | 100/38 | CF | 120/49 | S | S | CF | S | A | B | B | A | U | B | U | A | U | | |
| | (1) | 93 | U | U | 120/49 | S | S | CF | S | A | B | B | A | U | B | A | B | U | | |
| | (1) | 100 | U | U | 100/38 | S | S | CF | S | A | B | B | A | U | B | A | B | U | | |

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(*)-VR-1V Required
 (**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | | |
|---------------------------------|-------|-----------------------------|----------------------------------|--|----------------------------------|-----------|--------|------------|----------|---------------------|------------|-------|-------------|-------|---------------------|-----|---------------------|--------------------|------|--------|----------|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | | Pump Seal Elastomer | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1 Mag Drive & Wrapped Shaft Pumps Only | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar-SiCar | SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium |
| Sulfuric Acid:Ferrous Sulfate | | 10:Sat | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | |
| Sulfuric Acid:Phosphoric Acid | | 10:20 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | CF | |
| Sulfurous Acid | | 10 | 120/49 | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | S | B | A | U |
| Superphosphoric Acid (76% P2O5) | | 105%H 3PO4 | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | B | CF |
| Tannic Acid | | All | 210/99 | 150/65 | CF | S | S | S | S | S | S | S | S | S | S | S | B | B | A | A | |
| Tartaric Acid | | All | 210/99 | 150/65 | 275/135 | S | S | S | S | S | S | S | S | S | S | S | B | B | B | A | |
| Tetrachloroethylene | | 100 | 100/38 | U | 175/79 | S | S | S | S | S | S | S | S | U | U | B | B | A | A | | |
| Tetrachloropyridine | | See Chloropyridine | | | | | | | | | | | | | | | | | | | |
| Tetraethyl Lead | | 100 | CF | CF | CF | U | A | A | U | S | S | S | S | U | S | A | CF | CF | CF | | |
| Tetrapotassium Pyrophosphate | | See Potassium Pyrophosphate | | | | | | | | | | | | | | | | | | | |
| Tetrasodium Ethylene Diamine | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | |
| Thioglycolic Acid | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | |
| Thionyl Chloride | | 100 | U | U | CF | U | A | A | U | S | S | S | S | U | S | U | S | B | CF | | |
| Tin Fluoborate Plating Bath | (*) | All | 210/99 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | CF | CF | |
| Titanium Tetrachloride | | All | 180/82 | CF | CF | U | A | A | U | CF | CF | CF | U | U | S | S | B | B | A | | |
| Tobias Acid | | 100 | 210/99 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | |
| Toluene | | 100 | 100/38 | U | 200/93 | U | A | S | S | S | S | S | U | S | A | A | A | A | A | | |
| Toluene Sulfonic Acid | | All | 200/93 | CF | CF | S | S | S | S | S | S | S | U | U | S | CF | CF | A | CF | | |
| Tomato Sauce | | All | 190/88 | CF | 250/121 | S | S | S | S | S | S | S | U | S | A | A | A | CF | | | |
| Transformer Oils | | 100 | 150/65 | CF | CF | S | S | S | S | S | S | S | U | S | A | CF | CF | CF | | | |
| Tributyl Phosphate | | 100 | 140/60 | 100/38 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | |
| Trichloroacetic Acid | | 50 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | CF | A | U | |
| Trichloroethane | | 100 | 120/49 | U | 175/79 | U | A | S | S | S | S | S | U | S | A | CF | CF | CF | | | |
| Trichloroethylene | | 100 | U | U | 150/65 | U | A | S | S | S | S | S | U | S | B | A | B | A | | | |
| Trichloromonofluoro-methane | (*) | 100 | CF | CF | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | |
| Trichlorophenoxyacetic | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | CF | A | U | |
| Tricresyl Phosphate | | 100 | 160/71 | CF | CF | S | S | S | S | S | S | S | U | S | B | B | A | A | | | |
| Triethanolamine | | 100 | 120/49 | U | 150/65 | S | S | S | S | S | S | S | U | U | A | A | B | CF | | | |
| Triethylamine | | All | 120/49 | U | CF | S | S | S | S | S | S | S | U | S | A | CF | CF | CF | | | |

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C/F for mech seal and elas. above:
 (1) 50F
 (2) 70F
 (3)125F
 (4)150F

| Material of Construction | | | | | | Horizontal Pumps-mechanical seal | | | | | | | | | | Vertical Pumps | | | | | |
|---|-------|----------|----------------------------------|---------|---------|----------------------------------|--------|------------|----------|---------------------|------------|-------|-------------|---------------------|-----|---------------------|-------|--------------------|--------|----------|--|
| Chemical Environment | Notes | % Conc | Max Operating Temperature, °F/°C | | | Seal Type | | Seal Flush | | Seal Face Materials | | | | Pump Seal Elastomer | | | | Shaft and Hardware | | | |
| | | | VR-1 | VR-1(1) | EY-2 | Single | Double | External | Internal | Carbon-Ceramic | Carbon-SiC | SiCar | SiCar-SiCar | Viton | EPR | Per-Fluro Elastomer | 316SS | C-20 | Hast C | Titanium | |
| Trimethylene Chlorobromide | | 100 | 80/27 | U | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | |
| Trioctyl Phosphine Oxide, Diethyl Hexyl Phosphinic Acid, Kerosene | | 4:4:92 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | |
| Trisodium Phosphate | | All | 250/121 | 180/82 | 225/107 | S | S | A | U | S | S | S | U | U | S | B | B | A | CF | CF | |
| Tung Oil | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Turpentine | | 100 | 210/99 | 100/38 | 150/65 | S | S | S | S | S | S | S | S | U | S | A | A | A | A | A | |
| TWEEN Surfactant | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| TYDEX 12 Flocculant | | 12 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | U | A | CF | CF | |
| ULTRAWET Surfactants | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| URAN Fertilizer Urea Ammonium Nitrate Composition | | All | 150/65 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | |
| Urea | | 50 | 160/71 | 150/65 | 225/107 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | A | A | |
| Urea: Ammonium Nitrate:Water | | 35:44:20 | 150/65 | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | |
| Vanillin Black Liquor | | All | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | B | B | B | B | |
| VERSENE Chelating Agents | | All | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | B | |
| Vinegar | | 100 | 210/99 | 150/65 | CF | S | S | S | S | S | S | S | S | S | U | A | A | A | A | A | |
| Vinyl Acetate | | 100 | U | U | 120/49 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | CF | CF | CF | |
| Vinyl Toluene | | 100 | 120/49 | U | 200/93 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| Water, Sea | | 100 | 180/82 | 180/82 | 275/135 | S | S | S | S | S | S | S | S | S | S | S | B | A | A | A | |
| Water, Steam Condensate | | 100 | 180/82 | 180/82 | CF | S | S | S | S | S | S | S | S | S | S | A | CF | CF | CF | CF | |
| Whey | | All | 150/65 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | CF | CF | CF | |
| White Liquor (Pulp Mill) | | All | 180/82 | 180/82 | 257/135 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | CF | CF | |
| Xylene | | 100 | 100/38 | U | 200/93 | U | A | A | U | S | S | S | S | U | S | A | A | A | A | A | |
| Zinc Chloride | | 70 | 250/121 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | U | B | A | A | A | |
| Zinc Cyanide | | 100 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | A | |
| Zinc Cyanide Plating Bath | | All | 180/82 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | A | A | A | A | |
| Zinc Electrolyte | | All | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | B | A | A | A | |
| Zinc Fluoborate Plating Bath | (*) | All | 200/93 | 180/82 | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | CF | A | CF | A | A | |
| Zinc Sulfate | | All | 250/121 | 180/82 | CF | S | S | S | S | S | S | S | S | S | S | S | A | A | A | A | |

A-Preferred
B-Good
S-Satisfactory
U-Unsatisfactory
CF-Consult Factory

(*)-VR-1V Required
(**)-VR-1 BPO/DMA Required

C/F for mech seal and elas. above:
(1) 50F
(2) 70F
(3) 125F
(4) 150F