

SOLUTIONS: WATER & WASTEWATER TREATMENT

PIPE AND VALVE RECOMMENDATIONS FOR TYPICAL WATER AND WASTEWATER CHEMICALS

| Chemical | Valve Seal Material | Seal Material Rec. | Aboveground Pipe Rec. | Below Ground Pipe Rec. | Application | Typical Conc. |
|------------------------------------------------|------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------|
| ALUM (Aluminum Sulfate) $Al_2(SO_4)_3$ | - Type-21a Ball Valve - Type-14 Dia. Valve - Type-57P Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Chem Proline [®] PE100-RC, - Poly-Flo [®] PPR - PE100-RC Butt Fusion W/ Low Point Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | Clarification Coagulant; Flocculant | <50% |
| Aqueous Ammonia NH_4OH | - Type-21a Ball Valve - Type-14 Dia. Valve - Type-57P Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PPR Butt Fusion w/ Low Point Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | Biocide Chloramination | 19% |
| BLEACH* (Sodium Hypochlorite) $NaOCl$ | - Type-21a Vented Ball Valve - Type-14 Dia. Valve - Type-57P Butterfly Valve | FPM - PTFE | - Chem Proline [®] PE100-RC Butt Fusion - Poly-Flo [®] PE100-RC w/ Low Point Leak Detection | - Poly-Flo [®] PE100-RC Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | Biocide | 12.5% - 15.5% |
| CAUSTIC (Sodium Hydroxide) $NaOH$ | - Type-21a Ball Valve - Type-14 Dia. Valve - Type-57P Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PE100-RC or PPR w/ Low Point Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | PH Adjustment | 50% |
| MURIATIC ACID* (Hydrochloric Acid) HCl | - Type-21a Ball Valve - Type-14 Dia. Valve - Type-57P Butterfly Valve | FPM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PPR Butt Fusion w/ Low Point Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | PH Adjustment | 37% |
| Ferric Chloride $FeCl_3$ | - Type-21a Ball Valve - Type-14 Dia. Valve - Type-57P Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PPR Butt Fusion w/ Low Point Leak Detection | - PE 100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | Flocculant | 40% |
| Sulfuric Acid H_2SO_4 | - T-342 Dia. Valve w/ PTFE Diaphragm | PTFE | - Halar [®] (E-CTFE) Ultra Proline [®] Butt Fusion - Duo-Pro [®] | - Halar [®] X PP Duo-Pro [®] w/ Low Point Leak Detection or Cable Leak Detection | Raw Water Treatment & PH Adjustment | 93% - 98% |

* Special Considerations: Vented Ball Valves, PVDF Gas Barrier in Diaphragm Valves

Please Note: These are general recommendations. Please consult Asahi/America's Engineering Department.



| Chemical | Valve Seal Material | Seal Material Rec. | Aboveground Pipe Rec. | Below Ground Pipe Rec. | Application | Typical Conc. |
|------------------------------------------|---------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------|
| Hydrofluosilicic Acid H_2SiF_6 | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PE100-RC or PPR w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | Fluorination | 50% |
| Polymer | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PE100-RC or PPR w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | Dispersant | - |
| Anti-Scalant; Phosphonate | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PE100-RC or PPR w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | - PE100-RC or PPR Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | RO Membranes | - |
| Sodium Bisulfite $NaHSO_3$ | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PE100-RC or PPR w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | - Poly-Flo [®] PE100-RC or PPR Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | Excess Chlorine Removal | 40% |
| Corrosion Inhibitor | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PPR or PE100-RC | - Poly-Flo [®] PPR or PE100-RC Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] w/ Cable Leak Detection | Corrosion Inhibitor | - |
| Ferric Sulfate $Fe_2(SO_4)_3$ | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion - Poly-Flo [®] PPR or PE100-RC | - Poly-Flo [®] PE100-RC or PPR Butt Fusion w/ Low Point Leak Detection - Duo-Pro [®] | Coagulant | 50% |
| Citric Acid | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion | - HDPE Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection | Membrane Cleaning | Sat'd |
| Methanol (Methyl Alcohol) CH_3OH | - Type-21 Ball Valve - Type-14 Dia. Valve - Type-57 Butterfly Valve | EPDM - PTFE | - Polypropylene (PPR) PRO150 Socket or Butt Fusion | - HDPE Poly-Flo [®] Butt Fusion w/ Low Point Leak Detection | Nitrate to Nitrogen Conversion | Pure |
| Compressed Air | - Air-Pro [®] Ball Valve | - | - Air-Pro [®] | - Air-Pro [®] | Compressed Air | - |

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