

SOLUTIONS: CHEM PROLINE[®] CHEMICAL RESISTANCE

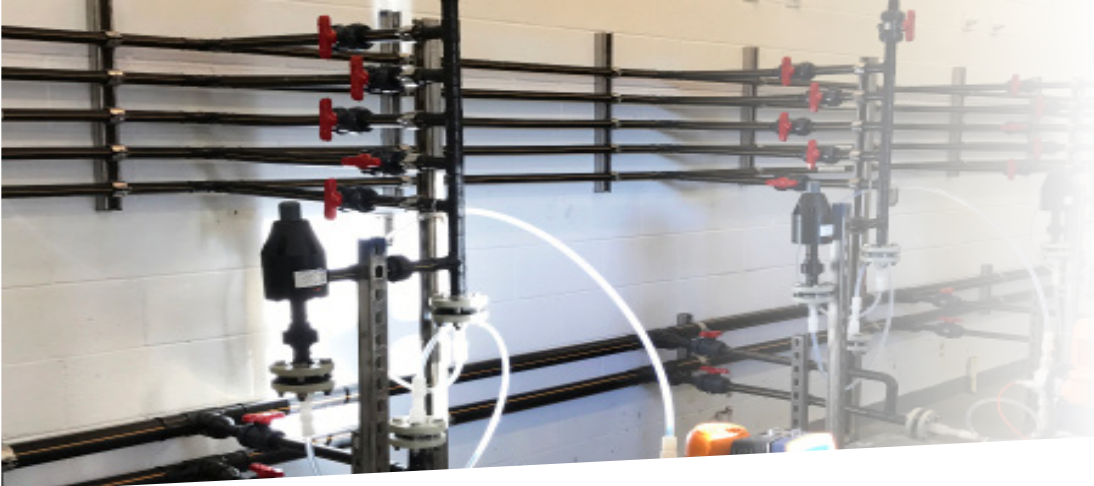
CHEM PROLINE[®] ADVANCED PE PIPING CHEMICAL RESISTANCE CHART



Chemical Name	Chemical Formula	Common Uses	Typical Concentrations/ Conditions	Chem Proline [®] and Alternative Reference	Chem Proline [®] Valve Body/Seal Material
Aluminum Sulfate (Alum)	Al ₂ (SO ₄) ₃	Coagulant / flocculant	< 50%	+	PVC/EPDM
Aluminum Chlorohydrate	Al ₂ Cl(OH)	Coagulant / flocculant	100%	+	PVC/EPDM
Aluminum Hydroxide	Al(OH) ₃	Coagulant / flocculant	50%	+	PVC/EPDM
Ammonia	NH ₃	Biocide	Gas anhydrous	+	PVC/EPDM
Ammonium Chloride	NH ₄ Cl	Water treatment - polymers	20%	+	PVC/EPDM (Vented ball valves)
Ammonium Hydroxide	NH ₄ OH	Disinfection	40% (Aqueous ammonia)	+	PVC/EPDM
Ammonium Sulfate	(NH ₄) ₂ SO ₄	Biocide Chloramination	40%	+	PVC/EPDM
Monosodium Phosphate	NaH ₂ PO ₄	RO Membranes Antiscalant	Solution	+	PVC/EPDM
Aqueous Ammonia	NH ₄ OH	Biocide Chloramination	19%	+	PVC/EPDM

Chem Proline[®] Key: + = Resistant, x = Not Resistant. * All references are based on ambient temperature liquid.

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



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Ascorbic Acid	C ₆ H ₈ O ₆	Dechlorination	Solution (based on citric acid; ascorbic acid info N/A)	+	PVC/EPDM
Sodium Hypochlorite (Bleach)	NaOCl	Biocide	up to 25%	+	PVC/FKM (Vented ball valves)
Calcium Carbonate	CaCO ₃	Neutralizing agent	Solution	+	PVC/EPDM
Calcium Chloride	CaCl ₂	Clarifying agent / drainage aid / pH control	Solution	+	PVC/EPDM (Vented ball valves)
Calcium Fluoride	CaF ₂	Fluoridation	Solution (based on CaCl ₂ ; CaF ₂ info unavailable)	+	PVC/EPDM
Calcium Hydroxide Solution (Lime)	Ca(OH) ₂	Neutralizing agent	Solution	+	PVC/EPDM
Calcium Hypochlorite	Ca(ClO) ₂	Biocide	Solution	+	PVC/FKM (Vented ball valves)
Calcium Oxide (Quicklime)	CaO ₂	Softening	Solution	+	PP/EPDM
Calcium Thiosulfate	CaS ₂ O ₃	Dechlorination	30%	+	No info available
Carbon Dioxide	CO ₂	Corrosion control	Gas	+	PVC/EPDM
Sodium Hydroxide (Caustic)	NaOH	pH control / corrosion control	50%	+	PVC/EPDM

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Chlorine Dioxide	ClO ₂	Biocide	0.1% - 0.5%	X Alt: Halar® E-CTFE	PVC/PTFE Diaphragm valves
Citric Acid	C ₆ H ₈ O ₇	Resin / membrane cleaner	Solution	+	PVC/EPDM
Copper Sulfate	CuSO ₄	Algaecide / taste-odor control	22%	+	PVC/EPDM
Nitrates & Nitrites	N/A	Corrosion inhibitor	Solution	+	PVC/EPDM
Ferric Chloride	FeCl ₃	Flocculant	40%	+	PVC/EPDM (Vented ball valves)
Ferrous Chloride	FeCl ₂	Flocculant	40%	+	PVC/EPDM (Vented ball valves)
Ferric Sulfate	Fe ₂ (SO ₄) ₃	Coagulant	50%	+	PVC/EPDM
Formic Acid	HCO ₂ H	Biocide Enhancer	Aqueous 85%	+	PVC/EPDM
Hydrochloric Acid	HCl	pH control	37%	+	PVC/FKM (Vented ball valves)
Hydrofluosilicic Acid	H ₂ SiF ₆	Fluoridation	50%	+	PVC/EPDM
Hydrogen Peroxide	H ₂ O ₂	Oxidant	100%	+	PVDF/PTFE Diaphragm valves

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Lithium Bromide	LiBr	Absorption - refrigerant	Solution	+	PVC/EPDM
Methanol (Methyl Alcohol)	CH ₃ OH	Nitrate to nitrogen conversion	Pure	+	PVC/EPDM
Oxygen	O ₂	Disinfection	Gas	+	PVC/EPDM
Ozonated Water	H ₂ O + O ₃	Biocide	Dilute solution (≥ 0.5 ppm)	+	PVC/EPDM
Ozone	O ₃	Biocide	Gas	X Alt: Halar® E-CTFE	PVC/EPDM
Peracetic Acid	CH ₃ CO ₃ H	Biocide	12%	+	PVC/EPDM
Phosphoric Acid	H ₃ PO ₄	Corrosion control	Solution	+	PVC/EPDM
Poly-aluminum Chloride	Al(OH)Cl ₃	Coagulant	Solution 20%	+	PVC/EPDM
Polymers	N/A	Dispersant	Solution	+	PVC/EPDM
Potassium Hydroxide	KOH	Clarification coagulant-flocculant / corrosion control	50%	+	PVC/EPDM
Potassium Permanganate	KMnO ₄	Biocide / taste-odor control	1% - 4%	+	PVC/EPDM

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Sodium Carbonate (Soda Ash)	Na ₂ CO ₃	Softening	Solution	+	PVC/EPDM
Sodium Aluminate	NaAl(OH ₄)	Coagulant	Solution	+	PVC/EPDM
Sodium Bisulfite	NaHSO ₃	Excess chlorine removal	40%	+	PVC/EPDM
Sodium Chloride	NaCl	Softening	Solution	+	PVC/EPDM
Sodium Chlorite	NaClO ₂	ClO ₂ generation	25%	+	PVDF/PTFE Diaphragm valves
Sodium Fluoride	NaF	Fluoridation	Solution	+	PVC/EPDM
Sodium Fluorosilicate	Na ₂ SiF ₆	Fluoridation	Solution	+	PVC/EPDM
Sodium Nitrite	NaNO ₂	Odor control	10%	+	PVC/EPDM
Sodium Polyphosphates	Na ₃ PO ₄	Corrosion control	Solution	+	PVC/EPDM
Sodium Silicate	Na ₂ SiO ₃	Coagulant / flocculant	Solution	+	PVC/EPDM
Sodium Sulfite	Na ₂ SO ₃	Oxygen scavenger / dechlorination	Solution	+	PVC/EPDM

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Sodium Thiosulfate	Na ₂ S ₂ O ₃	Dechlorination	Solution	+	No info available
Sulfur Dioxide	SO ₂	Dechlorination	Gas	+	PVC/EPDM
Sulfuric Acid	H ₂ SO ₄	Raw water treatment / pH adjustment	85%	+	PVC/FKM
			86% - 93%	X Alt: PVDF	PVDF/PTFE
			93% - 98.3%	X Alt: Halar® E-CTFE	Halar® E-CTFE
Zinc Sulfate	ZnSO ₄	Corrosion inhibitor	37%	+	PVC/EPDM

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