

# SOLUTIONS: CHEM PROLINE<sup>®</sup> CHEMICAL RESISTANCE

## CHEM PROLINE<sup>®</sup> ADVANCED PE PIPING CHEMICAL RESISTANCE CHART



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

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Ascorbic Acid	C <sub>6</sub> H <sub>8</sub> O <sub>6</sub>	Dechlorination	Solution (based on citric acid; ascorbic acid info N/A)	+	PVC/EPDM
Sodium Hypochlorite (Bleach)	NaOCl	Biocide	≤12.5% OK for Chem Proline® >12.5% use ECTFE	+	PVC/FKM (Vented ball valves)
Calcium Carbonate	CaCO <sub>3</sub>	Neutralizing agent	Solution	+	PVC/EPDM
Calcium Chloride	CaCl <sub>2</sub>	Clarifying agent / drainage aid / pH control	Solution	+	PVC/EPDM (Vented ball valves)
Calcium Fluoride	CaF <sub>2</sub>	Fluoridation	Solution (based on CaCl <sub>2</sub> ; CaF <sub>2</sub> info unavailable)	+	PVC/EPDM
Calcium Hydroxide Solution (Lime)	Ca(OH) <sub>2</sub>	Neutralizing agent	Solution	+	PVC/EPDM
Calcium Hypochlorite	Ca(ClO) <sub>2</sub>	Biocide	Solution	+	PVC/FKM (Vented ball valves)
Calcium Oxide (Quicklime)	CaO <sub>2</sub>	Softening	Solution	+	PP/EPDM
Calcium Thiosulfate	CaS <sub>2</sub> O <sub>3</sub>	Dechlorination	30%	+	No info available
Carbon Dioxide	CO <sub>2</sub>	Corrosion control	Gas	+	PVC/EPDM
Sodium Hydroxide (Caustic)	NaOH	pH control / corrosion control	50%	+	PVC/EPDM

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

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Lithium Bromide	LiBr	Absorption - refrigerant	Solution	+	PVC/EPDM
Methanol (Methyl Alcohol)	CH <sub>3</sub> OH	Nitrate to nitrogen conversion	Pure	+	PVC/EPDM
Oxygen	O <sub>2</sub>	Disinfection	Gas	+	PVC/EPDM
Ozonated Water	H <sub>2</sub> O + O <sub>3</sub>	Biocide	Dilute solution (≥ 0.5 ppm)	+	PVC/EPDM
Ozone	O <sub>3</sub>	Biocide	Gas	X Alt: Halar® E-CTFE	PVC/EPDM
Peracetic Acid	CH <sub>3</sub> CO <sub>3</sub> H	Biocide	12%	+	PVC/EPDM
Phosphoric Acid	H <sub>3</sub> PO <sub>4</sub>	Corrosion control	Solution	+	PVC/EPDM
Poly-aluminum Chloride	Al(OH)Cl <sub>3</sub>	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 <sub>4</sub>	Biocide / taste-odor control	1% - 4%	+	PVC/EPDM

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

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Sodium Thiosulfate	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Dechlorination	Solution	+	No info available
Sulfur Dioxide	SO <sub>2</sub>	Dechlorination	Gas	+	PVC/EPDM
Sulfuric Acid	H <sub>2</sub> SO <sub>4</sub>	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 <sub>4</sub>	Corrosion inhibitor	37%	+	PVC/EPDM

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