

Chemical Resistance Chart for Water Treatment

This chart suggests suitable materials of float and electrode for some typical water treatment's liquids. This information should be used as a general guide, and the final choice should be determined from actual application conditions.

A : No effect - Good B: Moderate effect - Need product modification C: Severe effect - Not recommended

*1: ABS float with PVC cable

Type of Applications

Model			Float with rigid stem				Float with cab	Electrode			Remarks
			Model ST				Model SQ	Model SEC			
Name of liquid	°C	bar	316SS	PVC	PP	PTFE	*1	316SS	Hastelloy B/C	Titanium	
Water & Soft water	50	open	A	A	A	A	A	A	A	A	Model SEC can not use in distilled water.
		2	A	A	A	A	B	B	B	B	
	90	open	A	C	A	A	B	B	B	B	
		2	A	C	C	A	B	B	B	B	
Pure water	50	open	A	A	A	A	C	C	C	C	316SS float causes pitting corrosion in Ultra-pure water
		2	A	A	A	A	C	C	C	C	
	90	open	A	C	C	A	C	C	C	C	
		2	A	C	C	A	C	C	C	C	
	150	10	A	C	C	C	C	C	C	C	
Chlorine water	50	open	C	A	A	A	C	C	A	A	
		2	C	A	A	A	C	C	B	B	
	90	open	C	C	C	A	C	C	A	A	
		2	C	C	C	A	C	C	B	B	
Acid-free Sewage pH7 without slurry with oil	50	open	A	A	A	A	A	A	A	A	Max Pressure (bar) for : PVC float : 2 316SS float : 10 Model SQ : 2 SEC/PVE Mtg : 2 SEC/SUS Mtg : 10
		2	A	A	A	A	B	B	B	B	
	90	open	A	C	C	A	C	B	B	B	
		2	A	C	C	A	C	B	B	B	
Acid-free Sewage pH7 with slurry without oil	50	open	B	A	A	B	B	B	A	A	
		2	B	A	A	B	B	A	B	B	
	90	open	B	C	C	B	C	B	B	B	
		2	B	C	C	B	C	B	B	B	
Acid-free Sewage pH7 without slurry with oil	50	open	A	B	B	B	B	B	C	C	If sewage contains a lot of oi, cable of SQ may stiffen. Capacitance. Model SCAP. is available.
		2	A	B	B	B	B	C	C	C	
	90	open	A	C	C	B	C	C	C	C	
		2	A	C	C	B	C	C	C	C	
Acid-free Sewage pH7 with slurry with oil	50	open	B	B	B	B	B	C	C	C	
		2	B	B	B	B	B	C	C	C	
	90	open	B	C	C	B	C	C	C	C	
		2	B	C	C	B	C	C	C	C	
Sewage with Sodium Hypochlorite (NaClO)	50	open	C	A	A	A	C	C	A	C	PVC, PTFE and Hastelloy C are unaffected.
		2	C	A	A	A	C	C	B	C	
	90	open	C	C	C	A	C	C	B	C	
		2	C	C	C	A	C	C	B	C	
Sewage with Caustic soda (NaOH)	50	open	A	A	A	A	C	A			
		2	A	A	A	A	C	B			
	90	open	A	C	C	A	C	B			
		2	A	C	C	A	C	C			
Sewage with weakly acid & alkaline (pH5-6 or 8-9)	50	open	C	A	A	A	A	C	A		SQ can use.
		2	C	A	A	A	A	C	B		
	90	open	C	C	C	A	C	C	B		
		2	C	C	C	A	C	C	B		
Sewage with strong acid & alkaline (pH1-4 or 10-14)	50	open	C	A	A	A	C	C	A		SQ can not use.
		2	C	A	A	A	C	C	B		
	90	open	C	C	C	A	C	C	B		
		2	C	C	C	A	C	C	B		

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Model Condition			Float with rigid stem				Float with cab	Electrode			Remarks
			Model ST				Model SQ	Model SEC			
Name of liquid	°C	bar	316SS	PVC	PP	PTFE	*2	316SS	Hastelloy B/C	Titanium	
Sludge water pH7 with suspended solids	50	open	C	C	C	C	A	C	C	C	
		2	C	C	C	C	B	C	C	C	
	90	open	C	C	C	C	C	C	C	C	
		2	C	C	C	C	C	C	C	C	
Sludge water pH5-9 with suspended solids	50	open	C	C	C	C	C	C	C	C	
		2	C	C	C	C	C	C	C	C	
	90	open	C	C	C	C	C	C	C	C	
		2	C	C	C	C	C	C	C	C	
	150	10	C	C	C	C	C	C	A	A	
Sea water	50	open	C	A	A	A	C	C	B	B	
		2	C	A	A	A	C	C	B	C	
	90	open	C	C	A	A	C	C	C	C	
		2	C	C	C	A	C	C	C	C	
Oils : Light or Heavy	50	open	B	C	C	C	C	C	C	C	
		2	B	C	C	C	C	C	C	C	
	90	open	A	C	C	C	C	C	C	C	
		2	A	C	C	C	C	C	C	C	
Oils : Vegetable	50	open	A	C	C	C	C	C	C	C	
		2	A	C	C	C	C	C	C	C	
	90	open	A	C	C	C	C	C	C	C	
		2	A	C	C	C	C	C	C	C	
Oils : Tubine	50	open	A	C	C	C	C	C	C	C	
		2	A	C	C	C	C	C	C	C	
	90	open	A	C	C	C	C	C	C	C	
		2	A	C	C	C	C	C	C	C	
Aluminum Sulfate AL ₂ (SO ₄) ₃	50	open	C	A	A	A	C	A	A	A	
	90	open	C	C	A	A	C	C	B	B	
Calcium Chloride	50	open	B	A	A	A	B	B	A	A	
Calcium Hydroxide Ca(OH) ₂	50	open	B	A	A	A	B	B	A	A	
	50	open	B	C	B		B	B	B	B	
Chromic acid Or O ₃ 3	10%	50	open	C	A	A	A	C	C	B	A
		90	open	C	C	C	A	C	C	B	A
	20%	50	open	C	A	C	A	C	C	B	A
		90	open	C	C	C	A	C	C	B	A
30%	50	open	C	C	C	A	C	C	C	B	
Ferric Chloride FECl ₃	50	open	C	A	A	A	C	C	B	A	
	90	open	C	C	A	A	C	C	C	B	
Ferric Sulfate Fe ₂ (SO ₄) ₃	50	open	C	A	A	A	C	C	B	B	
	90	open	C	C	A	A	C	C	C	C	
Ferrous Sulfate FeSO ₄	50	open	C	A	A	A	C	C	B	A	
	90	open	C	C	A	A	C	C	C	B	
Hydrochloric acid HCl	15%	50	open	C	A	A	A	C	C	A	C
		90	open	C	C	A	A	C	C	B	C
	25%	50	open	C	A	A	A	C	C	A	C
		90	open	C	C	A	A	C	C	B	C
	35%	50	open	C	A	A	A	C	C	A	C
		90	open	C	C	A	A	C	C	B	C

Capacitance, Model SCAP, or Pneumatic, Model SFP, are available.

Note Max. viscosity for 316SS float. SEC can not use because of nonconductive. SQ can not use because of cable stiffen.

PP float is economic.

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Model Condition				Float with rigid stem				Float with cab	Electrode			Remarks
				Model ST				Model SQ	Model SEC			
Name of liquid	°C	bar		316SS	PVC	PP	PTFE	*2	316SS	Hastelloy B/C	Titanium	
Hydrogen peroxide H ₂ O ₂	5%	50	open	A	C	C	A	C	A	A	B	304SS can use up to 50°C
	35%	90	open	A	C	C	A	C	A	A	B	
Nitric acid HNO ₃	10%	50	open	A	A	A	A	C	A	B	A	Titanium is better for high temp & concentrated application.
		90	open	B	C	A	A	C	B	C	B	
	25%	50	open	A	A	A	A	C	A	B	A	
		90	open	B	C	A	A	C	B	C	B	
	50%	50	open	A	A	A	A	C	A	B	A	
		90	open	B	C	A	A	C	B	C	B	
	98%	50	open	C	C	C	A	C	C	B	A	
		90	open	C	C	C	B	C	C	C	C	
Phosphoric acid H ₃ PO ₄	25%	50	open	A	A	A	A	C	A	A	C	
		90	open	C	C	A	A	C	C	B	C	
	50%	50	open	A	A	A	A	C	A	A	C	
		90	open	C	C	B	A	C	C	B	C	
	75%	50	open	A	A	A	A	C	A	A	C	
		90	open	C	C	C	A	C	C	B	C	
Poly Aluminum Chloride PVC			open	A	A	A		C	A	A		
			open	C	C	A		C	C	C		
Sodium Hydroxide (Caustic soda) NaOH	25%	50	open	A	A	A		C	A			
		90	open	A	C	A		C	B			
	50%	50	open	A	A	A		C	A			
		90	open	A	C	A		C	B			
Sodium Hypochlorite NaClO	10%	50	open	C	A	A		C	C	A	A	
		90	open	C	C	A		C	C	B	B	
	20%	50	open	C	A	A		C	C	A	A	
		90	open	C	C	A		C	C	B	B	
Sulfuric Hypochlorite H ₂ SO ₄	30%	50	open	C	A	A		C	C	A	C	PTFE is better for 98% concentration
		90	open	C	C	A		C	C	B	C	
	60%	50	open	C	A	A		C	C	B	C	
		90	open	C	C	A		C	C	B	C	
	90%	50	open	C	B	A		C	C	A	C	
		90	open	C	C	A		C	C	B	C	
	98%	50	open	C	B	C		C	C	A	C	
		90	open	C	C	C		C	C	B	C	