GEM Flowmeter Chemical Compatibility Chart

Fluid	Concentration (%)	Temperature (°F / code)	Electrodes							Liners				
			Stainless Steel (316L)	Hastelloy B (HB)	Hastelloy C (HC)	Titanium (Ti)	Tantalum (Ta)	Platinum (Pt)	Tungsten Carbide (WC)	Neoprene	Polyurethane	PTFE	FEP	PFA
Barium hydroxide ($Ba(OH)_2$)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Calcium chloride ($CaCl_2$)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ferric chloride ($FeCl_3$)			✗	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
Ferric sulfate ($Fe_2(SO_4)_3$)			✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ferric sulfate ($Fe_2(SO_4)_3$)		R	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ferric sulfate ($Fe_2(SO_4)_3$)	≤30	≤149	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ferric sulfide (Fe_2S_3)	100		✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ferrous nitrate ($Fe(NO_3)_2$)		R	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fluoboric acid (HBF_4)	100		✗	✗	✗	✗	✗	✓	✗	✓	✗	✓	✓	✓
Fluosilicic acid ($H_2[SiF_6]$)	10–40	R–86	✗	✗	✗	✗	✗	✓	✗	✗	✗	✓	✓	✓
Hydrochloric acid (HCl)	0.5–5	R	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Hydrochloric acid (HCl)	10–20	R	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Hydrochloric acid (HCl)	37	R	✓	✗	✗	✗	✓	✓	✗	✓	✗	✓	✓	✓
Hydrochloric acid (HCl)	10	122	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓
Hydrochloric acid (HCl)	5	140	✗	✗	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓
Hydrochloric acid (HCl)	0.5–5	B	✗	✗	✗	✓	✓	✓	✓	✗	✗	✓	✓	✓
Hydrochloric acid (HCl)	10–37	B	✗	✗	✗	✗	✓	✓	✗	✗	✗	✓	✓	✓
Magnesium chloride ($MgCl_2$)			✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium chloride (KCl)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Seawater	100		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium chloride (NaCl)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium hydroxide (NaOH)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium thiosulfate ($Na_2S_2O_3$)	25	R	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Sodium thiosulfate ($Na_2S_2O_3$)	25–100	B	✗	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓
Sulfur monochloride (S_2Cl_2)		R–B	✓	✓	✓	✗	✓	✗	✗	✗	✗	✓	✓	✓
Sulfuric acid (H_2SO_4)	2–5	R	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sulfuric acid (H_2SO_4)	10	R	✗	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
Sulfuric acid (H_2SO_4)	25–60	R	✗	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
Sulfuric acid (H_2SO_4)	70–85	R	✗	✓	✓	✗	✓	✓	✓	✗	✗	✓	✓	✓
Sulfuric acid (H_2SO_4)	90–96	R	✓	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓	✓
Sulfuric acid (H_2SO_4)	2–5	302	✗	✗	✗	✓	✗	✓	✗	✓	✗	✓	✓	✓
Sulfuric acid (H_2SO_4)	5–60	356	✗	✗	✗	✗	✗	✓	✗	✗	✗	✓	✓	✓
Sulfuric acid (H_2SO_4)	77–96	302	✗	✗	✗	✗	✗	✓	✗	✗	✗	✓	✓	✓
Sulfurous acid (H_2SO_3)	10–Sat	R	✗	✗	✗	✗	✓	✓	✓	✗	✗	✓	✓	✓
Tannic acid ($C_{76}H_{52}O_{46}$)	10–50	R–B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tartaric acid ($C_4H_6O_6$)	~100	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tartaric acid ($C_4H_6O_6$)	~100	B	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key:

✓ (Green)-Suitable, ✓ (Yellow)- Usable, but service life may be short, ✓ (Brown)- Material may resist corrosion, but not recommended, ✗ - Not Suitable

R- Room Temperature, B - Boiling Temperature, Sat – Saturated

GloTech Corporation
4001 NW 124th Ave ● Coral Springs, FL 33065 U.S.A
Phone: (954) 908-9955 ● Fax: (954) 725-8741 ● www.glotech-corp.com