

# CHEMICAL COMPATIBILITY GUIDE

## Chemical Compatibility Guide for GPI Flowmeters

**R** = Recommended  
**N** = Not Recommended  
**X** = Unknown or Not Applicable

	Metals						Plastics								Journals, Shafts				O-Rings						
	Bronze	Aluminum	Brass	304 SS	316 SS	CD4MCu	PVC	PBT Polyester (Valox)	Nylon 6,6	Acetal (Delrin)	PPS (Ryton)	PVDF (Kynar)	Rulon 641	PEEK	Carbon - Graphite	Ceramic / Sapphire	Tungsten Carbide	Ferrite (MnZn)	Hastelloy-C	FKM/Fluorocarbon (Viton)	PTFE (Teflon)	EPDM	Buna-N (Nitrile)	Perfluoroelastomer (FFKM)	
Acetic Acid	N	R	N	N	R	R	N	X	N	N	R	N	R	R	R	R	N	X	R	R	R	R	N	R	
Acetone	R	R	R	R	R	R	N	N	R	R	R	N	R	R	R	R	R	R	R	R	N	R	R	N	R
Alcohols: Isobutyl	R	R	X	R	R	R	R	X	X	R	X	X	R	R	R	R	R	X	R	R	R	R	R	R	
Alcohols: Isopropyl	R	R	X	R	R	R	R	R	R	R	X	X	R	R	R	R	R	R	R	R	R	R	R	R	
Alcohols: Methyl	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	
Ammonia, Anhydrous	N	R	N	R	R	R	R	X	X	N	R	R	R	R	X	R	R	X	R	N	R	R	R	R	
Ammonia, Liquid	N	R	X	R	R	R	R	X	R	N	R	R	R	R	R	R	R	X	R	N	R	R	N	R	
Ammonium Hydroxide	N	R	N	R	R	R	R	N	N	N	R	R	R	R	R	R	N	R	R	R	R	R	N	R	
Antifreeze	R	R	X	X	R	X	R	X	X	N	X	X	X	R	X	R	R	R	X	R	X	R	R	R	
Boric Acid	R	N	X	R	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	
Butyl Acetate	R	R	R	R	R	R	N	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	N	R	
Calcium Chloride	R	N	X	N	R	R	N	X	R	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Calcium Hypochlorite	N	N	X	N	R	R	R	X	X	N	R	R	R	R	R	R	N	R	R	R	R	R	N	R	
Carbon Tetrachloride (wet)	R	N	R	R	R	R	X	X	X	R	R	R	R	X	R	R	X	X	R	X	R	N	N	R	
Carbonic Acid	R	R	N	R	R	R	R	X	R	R	R	R	R	R	R	R	R	X	R	R	R	R	N	R	
Chlorine Water	R	N	N	N	N	R	R	X	N	N	N	R	R	N	R	X	R	R	R	R	R	N	N	R	
Chlorine, Anhydrous Liquid	N	N	N	N	N	N	N	X	X	R	N	R	R	N	R	N	X	N	N	R	R	R	N	R	
Clorox® Bleach (Sodium Hypochlorite)	X	N	X	R	R	R	R	R	N	N	N	R	R	R	X	R	N	X	R	R	R	R	N	R	
Detergents	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	
Diesel Fuel	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	
Ethanol	R	R	R	R	R	R	N	X	R	R	X	X	R	R	R	R	R	X	R	R	R	R	N	R	
Ethylene Dichloride	N	R	R	R	R	R	N	X	X	R	R	R	R	R	R	R	R	X	R	R	R	N	N	R	
Ethylene Glycol	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Ferric Chloride	N	N	N	N	N	R	R	X	N	N	R	R	R	R	R	R	N	X	R	R	R	R	R	R	
Freon 113	X	X	X	X	X	R	R	X	X	R	R	R	R	R	X	R	R	R	R	R	R	N	R	R	
Fuel Oils (#1 and #2)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	X	R	R	R	N	R	R	
Gasoline, Unleaded	R	R	X	R	R	R	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	
Heptane	R	R	R	R	R	R	N	X	X	R	R	R	R	R	R	R	R	X	R	R	R	N	R	R	
Hydraulic Oil (Petro)	R	R	R	R	R	R	R	R	X	R	N	R	R	R	R	R	R	R	R	R	R	N	R	R	
Hydraulic Oil (Synthetic)	R	R	R	R	R	R	R	R	X	X	X	R	R	R	R	R	R	R	R	R	R	R	N	R	
Hydrochloric Acid 20%	N	N	X	N	N	R	R	R	N	N	N	R	R	N	R	N	N	R	R	R	R	N	X	R	
Hydrochloric Acid 37%	N	N	X	N	N	R	R	X	N	N	N	R	R	R	R	N	N	R	R	R	R	R	R	R	
Hydrochloric Acid 100%	N	N	N	N	N	R	N	N	N	N	N	R	R	R	R	R	N	R	R	R	R	N	N	R	
Hydrofluoric Acid 20%	R	N	X	N	N	R	R	R	N	N	R	R	R	N	X	N	N	R	R	R	R	N	N	R	
Hydrofluoric Acid 100%	R	N	X	R	R	R	N	N	N	N	N	R	R	N	R	N	N	R	R	R	R	N	N	R	
Hydrogen Peroxide 10%	R	R	X	R	R	R	R	R	N	N	R	R	R	R	N	R	N	R	R	R	R	R	N	R	
Hydrogen Peroxide 30%	R	R	X	R	R	R	R	X	N	N	R	R	R	R	N	X	N	R	R	R	R	R	N	R	
Hydrogen Peroxide 100%	R	R	N	R	R	R	R	X	N	N	N	R	R	R	N	X	N	R	R	R	R	N	N	R	
Isopropyl Acetate	R	N	X	N	R	R	N	X	X	N	X	N	R	R	R	R	R	X	R	N	R	R	N	R	
Kerosene	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	
Ketones	R	R	X	R	R	R	N	X	X	N	R	N	R	R	R	R	R	X	R	N	R	R	N	R	

# CHEMICAL COMPATIBILITY GUIDE

REFERENCE

## Chemical Compatibility Guide for GPI Flowmeters

**R** = Recommended  
**N** = Not Recommended  
**X** = Unknown or Not Applicable

	Metals						Plastics								Journals, Shafts				O-Rings					
	Bronze	Aluminum	Brass	304 SS	316 SS	CD4MCu	PVC	PBT Polyester (Valox)	Nylon 6,6	Acetal (Delrin)	PPS (Ryton)	PVDF (Kynar)	Rulon 641	PEEK	Carbon - Graphite	Ceramic / Sapphire	Tungsten Carbide	Ferrite (MnZn)	Hastelloy-C	FKM/Fluorocarbon (Viton)	PTFE (Teflon)	EPDM	Buna-N (Nitrile)	Perfluoroelastomer (FFKM)
Lacquer Thinners	R	R	R	R	R	R	N	X	X	N	X	X	R	X	R	X	R	X	R	N	R	N	N	R
Lacquers	R	R	X	R	R	R	N	X	X	N	X	N	R	R	R	R	R	X	R	N	R	N	N	R
Lye: NaOH Sodium Hydroxide	N	N	N	R	R	N	R	X	X	N	R	N	R	R	X	R	R	X	N	R	R	R	R	R
Magnesium Hydroxide	R	N	N	R	R	R	R	X	R	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R
Methanol (Methyl Alcohol)	R	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R
Methyl Ethyl Ketone	R	R	R	R	R	R	N	R	R	N	R	N	R	R	R	R	X	R	R	N	R	R	N	R
Motor Oil	R	R	X	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	X	X	R	N	R	R
Nitrating Acid (> 15% H2SO4)	X	N	X	N	N	R	N	X	X	N	N	X	R	N	X	R	N	X	R	X	R	R	N	R
Nitric Acid (5-10%)	R	R	N	R	R	R	R	X	R	N	R	R	R	N	R	N	N	X	R	R	R	R	N	R
Nitric Acid (50%)	R	N	N	R	R	R	R	X	N	N	N	R	R	N	R	N	N	N	R	R	R	N	N	R
Nitric Acid (Concentrated)	R	N	N	R	R	R	R	R	N	N	N	R	R	N	N	N	N	N	R	R	R	N	N	R
Oils: Fuel (1, 2, 3, 5A, 5B, 6)	R	N	R	R	R	R	R	X	R	N	R	R	R	R	R	R	R	X	R	R	R	N	R	R
Oils: Hydraulic Oil (Petro)	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R	R	R	X	R	R	R	N	R	R
Oils: Mineral	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R
Oils: Transformer	X	R	X	R	R	X	R	R	X	R	X	R	R	R	R	R	R	X	X	R	R	N	R	R
Phosphoric Acid (< 40%)	R	N	N	N	N	R	R	X	N	N	R	R	R	R	R	R	N	N	R	R	R	R	N	R
Phosphoric Acid (> 40%)	R	N	N	N	N	R	R	X	N	N	R	R	R	R	R	R	N	X	R	R	R	R	N	R
Potassium Chloride	R	N	N	R	R	R	R	R	R	R	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Potassium Hydroxide (Caustic Potash)	N	N	N	R	R	R	R	N	R	R	R	R	R	R	N	N	N	R	R	R	R	R	R	R
Potassium Hypochlorite	N	N	X	N	R	R	R	X	X	X	R	R	R	X	X	N	N	X	R	X	R	R	R	R
Propane (Liquefied)	R	R	R	R	R	R	R	X	R	R	X	R	R	R	R	R	R	X	R	R	R	N	R	R
Propylene Glycol	R	R	X	R	R	R	N	R	R	R	X	X	R	R	X	R	R	R	R	R	R	R	R	R
Salt Brine (NaCl Saturated)	R	R	X	R	R	R	R	X	X	X	R	R	R	R	R	X	N	X	R	R	R	R	R	R
Sea Water	R	R	N	N	N	R	R	R	X	R	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Soap Solutions	R	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Sodium Bicarbonate	R	N	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Sodium Chloride	R	N	N	R	R	R	R	R	R	R	R	R	R	R	R	R	N	R	R	R	R	R	R	R
Sodium Hydroxide (20%)	R	N	R	R	R	R	R	X	R	R	R	R	R	R	R	R	N	X	R	N	R	R	R	R
Sodium Hydroxide (50%)	N	N	N	R	R	N	R	X	R	R	R	R	R	R	X	R	N	X	N	N	R	R	R	R
Sodium Hydroxide (80%)	N	N	N	N	R	R	R	N	R	N	R	R	R	R	R	R	N	N	R	N	R	R	N	R
Sodium Hypochlorite (< 20%)	N	N	N	N	N	R	R	X	N	N	R	R	R	R	R	R	N	R	R	R	R	R	R	R
Sodium Hypochlorite (100%)	N	N	N	N	N	R	R	X	N	N	R	R	R	R	N	R	N	R	R	R	R	R	N	R
Sulfuric Acid (< 10%)	R	N	X	N	R	R	R	X	N	N	R	R	R	R	R	R	N	X	R	R	R	R	R	R
Sulfuric Acid (75-100%)	R	N	X	N	N	R	N	X	N	X	R	R	R	N	N	R	N	N	R	R	R	R	N	R
Toluene (Toluol)	R	R	R	R	R	R	N	N	R	N	R	R	R	R	R	R	R	R	R	N	R	N	N	R
Trichloroethylene	R	N	X	R	R	R	N	X	R	N	R	R	R	R	R	X	R	R	R	R	R	N	N	R
Vinegar	R	N	N	R	R	R	R	R	N	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Water, Deionized	X	N	R	R	R	R	R	X	X	X	R	R	R	X	R	R	X	X	R	R	R	R	R	R
Water, Distilled	R	N	R	R	R	R	R	R	X	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R
Water, Salt	R	N	N	R	R	R	R	X	X	R	R	R	R	R	R	R	R	X	R	R	R	R	R	R
Xylene	R	R	R	R	R	R	N	N	R	R	R	R	R	R	R	R	R	X	R	R	R	N	N	R