



Chemical Compatibility Guide

SOLUTION	TYPE OF HEATER	SOLUTION	TYPE OF HEATER
Isoprep Acid Salts	PTFE	Silver Lume	304 Stainless Steel
Jetal	304 Stainless Steel	Silver Nitrate	316 Stainless Steel
Lead Acetate	304 Stainless Steel	Sodium Bisulfate	PTFE or Quartz
Lime Saturated Water (Alkaline)	316 Stainless Steel	Sodium Carbonate	Titanium
Linseed Oil	304 Stainless Steel	Sodium Chlorate	Titanium
Magnesium Hydroxide	304 Stainless Steel	Sodium Chloride	Titanium
Magnesium Nitrate	PTFE or Quartz	Sodium Cyanide	304 Stainless Steel
Manganese Phosphate	316 Stainless Steel	Sodium Dichromate (Hot Seal)	316 Stainless Steel
McDermid 629	PTFE	Sodium Hydroxide	Steel
Mercuric Chloride	Titanium	Sodium Hypochlorite	PTFE
Muriatic Acid	PTFE or Quartz	Sodium Persulfate	PTFE or Quartz
Nickel (Plating Solution) (Watts)	PTFE, Quartz or Titanium	Stannate	Steel
Nickel Acetate Seal	316 Stainless Steel	Stanostar	PTFE or Quartz
Nickel Chloride	Titanium	Stearic Acid	Quartz
Nitric Acid	PTFE or Quartz	Sulfamate Nickel	PTFE, Quartz or Titanium
Nitric Hydrochloric Acids	PTFE or Quartz	Sulfur	PTFE or Quartz
Nitric Phosphoric	Quartz	Sulfur Peroxide	PTFE or Quartz
Oil	Steel	Sulfuric Acid	PTFE or Quartz
Oleic Acid	PTFE or Quartz	Sulphamic Acid	PTFE or Quartz
Oxalic Acid	PTFE or Quartz	Tannic Acid	Titanium
Paint Stripper (Alkaline)	304 Stainless Steel	Tin Nickel	PTFE
Perchlorethylene	316 Stainless Steel	Tin Plating (Acid) (Fluoborate)	PTFE
Phosphate	316 Stainless Steel	Tin Plating (Acid) (Stanus/Sulphate)	PTFE or Quartz
Phosphate Cleaner	304 Stainless Steel	Tin Plating (Alkaline)	304 Stainless Steel
Phosphoric Acid (No Fluoride)	PTFE or Quartz	Trichlorethylene	316 Stainless Steel
Potassium Acid Sulfate	PTFE or Quartz	Trioxide (Pickle)	PTFE or Quartz
Potassium Cyanide	304 Stainless Steel	Turco (4181, 4338)	316 Stainless Steel
Potassium Hydrochloric	PTFE or Quartz	Unichrome	PTFE or Quartz
Potassium Hydroxide	304 Stainless Steel	Water	316 Stainless Steel or Quartz
Potassium Permanganate	PTFE or Titanium	Wood's Nickel Strike	PTFE, Quartz or Titanium
Rhodium	PTFE or Quartz	Yellow Dichromate	PTFE or Quartz
Rochelle Salt Cyanide	304 Stainless Steel	Zinc Acid	PTFE or Titanium
Ruthenium	PTFE or Quartz	Zinc Ammonium Chloride	Quartz or Titanium
Salt (Actine)	PTFE	Zinc Cyanide	304 Stainless Steel
Sea Water	Titanium	Zinc Phosphate	316 Stainless Steel
Silver Bromide	316 Stainless Steel	Zinc Phosphate (Fluoride)	PTFE
Silver Cyanide	304 Stainless Steel	Zincate	304 Stainless Steel

Solutions requiring derated heaters are indicated in red type.

PTFE is the abbreviation for PolyTetraFluoroEthylene.



Note: The data listed is provided as a reference and is offered as a guide only. It is not intended to be used as the sole basis of design or to establish specification limits. **Tempco Electric Heater Corporation** assumes no obligation or liability for any advice furnished by it or for results obtained from its use. Due to the complexities of solutions and applications, it is the customer's responsibility to contact their chemical supplier for heater material compatibility and recommendations. Ultimate responsibility lies with the user.

Do not use electric immersion heaters to heat flammable solutions!



Please insure applicability of heater before installation since we cannot guarantee heaters against premature failure due to corrosion or chemical destruction caused by unusual conditions over which we have no control such as:

- Excessively high solution temperatures
- The concentration of the solution
- The presence of inhibitors
- The presence of other acids causing a secondary reaction
- Stray electrical currents
- Flux floating on the surface
- The presence of dissolved gases
- Excessive sludge buildup
- Aeration
- Stagnant or turbulent flow of the solution
- Presence of oxygen or an oxidizing agent in the solution
- Erosion
- High Pressures or Vacuum Conditions