

STARKE PPH Pipes and fittings Chemical Resistance Chart				
Chemical	Concentration	Temperature	Resistance	Notes
Acids				
Acetic Acid	10-50%	Up to 60°C	Excellent	Suitable for most applications.
Acetic Acid	10-50%	60-80°C	Good	Limited resistance at elevated temperatures.
Acetic Acid	100%	Up to 60°C	Good	Avoid prolonged exposure at high concentrations.
Hydrochloric Acid	10-30%	Up to 60°C	Excellent	Widely used in chemical processing.
Hydrochloric Acid	10-30%	60-80°C	Good	Limited resistance at elevated temperatures.
Hydrochloric Acid	37%	Up to 60°C	Good	Avoid prolonged exposure at high concentrations.
Sulfuric Acid	10-50%	Up to 60°C	Excellent	Suitable for dilute to moderate concentrations.
Sulfuric Acid	10-50%	60-80°C	Good	Limited resistance at elevated temperatures.
Sulfuric Acid	70-98%	Up to 60°C	Poor	Not recommended for concentrated sulfuric acid.
Nitric Acid	10-30%	Up to 60°C	Good	Limited resistance; avoid prolonged exposure.
Nitric Acid	10-30%	60-80°C	Fair	Significant degradation at elevated temperatures.
Nitric Acid	>30%	Up to 60°C	Poor	Not recommended for high concentrations.
Phosphoric Acid	10-85%	Up to 60°C	Excellent	Suitable for most concentrations.
Phosphoric Acid	10-85%	60-80°C	Good	Limited resistance at elevated temperatures.
Hydrofluoric Acid	Any	Up to 60°C	Poor	Not recommended; PPH is not resistant to hydrofluoric acid.
Bases				
Sodium Hydroxide (Caustic Soda)	10-50%	Up to 60°C	Excellent	Widely used in alkaline environments.
Sodium Hydroxide	10-50%	60-80°C	Good	Limited resistance at elevated temperatures.
Sodium Hydroxide	50-73%	Up to 60°C	Good	Avoid prolonged exposure at high concentrations.
Ammonium Hydroxide	10-30%	Up to 60°C	Excellent	Suitable for most applications.
Ammonium Hydroxide	10-30%	60-80°C	Good	Limited resistance at elevated temperatures.

STARKE PLASTICS PRIVATE LIMITED

1106, Satyamev Elite, Nr. Vakil Bridge, Bopal Approach, Ahmedabad - 380058, Gujarat, India

M: +91 90999 74166 | Email: sales@starkeplastics.com

Potassium Hydroxide	10-50%	Up to 60°C	Excellent	Similar resistance to sodium hydroxide.
Potassium Hydroxide	10-50%	60-80°C	Good	Limited resistance at elevated temperatures.
Salts				
Sodium Chloride (Brine)	10-25%	Up to 60°C	Excellent	Suitable for saltwater and brine solutions.
Sodium Chloride	10-25%	60-80°C	Good	Limited resistance at elevated temperatures.
Calcium Chloride	10-25%	Up to 60°C	Excellent	Widely used in cooling and heating systems.
Calcium Chloride	10-25%	60-80°C	Good	Limited resistance at elevated temperatures.
Copper Sulfate	10-25%	Up to 60°C	Excellent	Suitable for most applications.
Copper Sulfate	10-25%	60-80°C	Good	Limited resistance at elevated temperatures.
Organic Compounds				
Ethanol	100%	Up to 60°C	Excellent	Suitable for most applications.
Ethanol	100%	60-80°C	Good	Limited resistance at elevated temperatures.
Methanol	100%	Up to 60°C	Good	Limited resistance at higher temperatures.
Methanol	100%	60-80°C	Fair	Significant degradation at elevated temperatures.
Acetone	100%	Up to 60°C	Poor	Not recommended for prolonged exposure.
Benzene	100%	Up to 60°C	Poor	Not recommended; PPH is not resistant to aromatic hydrocarbons.
Toluene	100%	Up to 60°C	Poor	Not recommended; similar to benzene.
Formaldehyde	10-37%	Up to 60°C	Excellent	Suitable for most applications.
Formaldehyde	10-37%	60-80°C	Good	Limited resistance at elevated temperatures.
Other Chemicals				
Hydrogen Peroxide	10-30%	Up to 60°C	Excellent	Suitable for most applications.
Hydrogen Peroxide	10-30%	60-80°C	Good	Limited resistance at elevated temperatures.
Chlorine Water	10-20%	Up to 60°C	Good	Limited resistance at higher concentrations.
Chlorine Water	10-20%	60-80°C	Fair	Significant degradation at elevated temperatures.
Ozone	Any	Up to 60°C	Poor	Not recommended; PPH is not resistant to ozone.
Sodium Hypochlorite (Bleach)	10-15%	Up to 60°C	Good	Limited resistance; avoid prolonged exposure.

STARKE PLASTICS PRIVATE LIMITED

1106, Satyamev Elite, Nr. Vakil Bridge, Bopal Approach, Ahmedabad - 380058, Gujarat, India

M: +91 90999 74166 | Email: sales@starkeplastics.com

Sodium Hypochlorite	10-15%	60-80°C	Fair	Significant degradation at elevated temperatures.
Potassium Permanganate	10-20%	Up to 60°C	Excellent	Suitable for most applications.
Potassium Permanganate	10-20%	60-80°C	Good	Limited resistance at elevated temperatures.
Chemical Mixture				
Acid Mixtures				
Sulfuric Acid + Nitric Acid	10-50% H ₂ SO ₄ + 10-30% HNO ₃	Up to 60°C	Good	PPH resists dilute mixtures but degrades at higher concentrations or temperatures.
	10-50% H ₂ SO ₄ + 10-30% HNO ₃	60-80°C	Fair	Significant degradation at elevated temperatures.
	70-98% H ₂ SO ₄ + >30% HNO ₃	Up to 60°C	Poor	Highly corrosive; not recommended.
Sulfuric Acid + Hydrochloric Acid	10-50% H ₂ SO ₄ + 10-30% HCl	Up to 60°C	Excellent	PPH performs well in dilute to moderate concentrations.
	10-50% H ₂ SO ₄ + 10-30% HCl	60-80°C	Good	Limited resistance at elevated temperatures.
	70-98% H ₂ SO ₄ + 37% HCl	Up to 60°C	Poor	Highly corrosive; not recommended.
Phosphoric Acid + Nitric Acid	10-85% H ₃ PO ₄ + 10-30% HNO ₃	Up to 60°C	Good	Limited resistance; avoid prolonged exposure.
	10-85% H ₃ PO ₄ + 10-30% HNO ₃	60-80°C	Fair	Significant degradation at elevated temperatures.
	10-85% H ₃ PO ₄ + >30% HNO ₃	Up to 60°C	Poor	Highly corrosive; not recommended.
Acetic Acid + Nitric Acid	10-50% CH ₃ COOH + 10-30% HNO ₃	Up to 60°C	Good	Moderate resistance; avoid high concentrations or temperatures.
	10-50% CH ₃ COOH + 10-30% HNO ₃	60-80°C	Fair	Significant degradation at elevated temperatures.
	100% CH ₃ COOH + >30% HNO ₃	Up to 60°C	Poor	Highly corrosive; not recommended.

STARKE PLASTICS PRIVATE LIMITED

1106, Satyamev Elite, Nr. Vakil Bridge, Bopal Approach, Ahmedabad - 380058, Gujarat, India

M: +91 90999 74166 | Email: sales@starkeplastics.com

Aqua Regia (HCl + HNO ₃)	37% HCl + 65% HNO ₃ (3:1 ratio)	Up to 60°C	Poor	Highly corrosive; PPH is not suitable for aqua regia.
Base Mixtures				
Sodium Hydroxide + Ammonium Hydroxide	10-50% NaOH + 10-30% NH ₄ OH	Up to 60°C	Excellent	PPH is highly resistant to alkaline mixtures at moderate temperatures.
	10-50% NaOH + 10-30% NH ₄ OH	60-80°C	Good	Limited resistance at elevated temperatures.
Sodium Hydroxide + Potassium Hydroxide	10-50% NaOH + 10-50% KOH	Up to 60°C	Excellent	Similar resistance to individual bases.
	10-50% NaOH + 10-50% KOH	60-80°C	Good	Limited resistance at elevated temperatures.
Solvent Mixtures				
Ethanol + Water	10-100% Ethanol	Up to 60°C	Excellent	PPH is highly resistant to ethanol-water mixtures.
	10-100% Ethanol	60-80°C	Good	Limited resistance at elevated temperatures.
Methanol + Water	10-100% Methanol	Up to 60°C	Good	Limited resistance at higher methanol concentrations.
	10-100% Methanol	60-80°C	Fair	Significant degradation at elevated temperatures.
Acetone + Water	10-100% Acetone	Up to 60°C	Poor	PPH is not resistant to acetone, even in diluted mixtures.
Benzene + Toluene	Any ratio	Up to 60°C	Poor	PPH is not resistant to aromatic hydrocarbons.
Oxidizing Mixtures				
Hydrogen Peroxide + Sulfuric Acid	10-30% H ₂ O ₂ + 10-50% H ₂ SO ₄	Up to 60°C	Good	Moderate resistance; avoid prolonged exposure.
	10-30% H ₂ O ₂ + 10-50% H ₂ SO ₄	60-80°C	Fair	Significant degradation at elevated temperatures.
Hydrogen Peroxide + Nitric Acid	10-30% H ₂ O ₂ + 10-30% HNO ₃	Up to 60°C	Fair	Limited resistance; significant degradation at elevated temperatures.
	10-30% H ₂ O ₂ + 10-30% HNO ₃	60-80°C	Poor	Highly corrosive; not recommended.
Salt Mixtures				
Sodium Chloride + Calcium Chloride	10-25% NaCl + 10-25% CaCl ₂	Up to 60°C	Excellent	PPH is highly resistant to salt mixtures.

STARKE PLASTICS PRIVATE LIMITED

1106, Satyamev Elite, Nr. Vakil Bridge, Bopal Approach, Ahmedabad - 380058, Gujarat, India

M: +91 90999 74166 | Email: sales@starkeplastics.com

	10-25% NaCl + 10-25% CaCl ₂	60-80°C	Good	Limited resistance at elevated temperatures.
Copper Sulfate + Sodium Chloride	10-25% CuSO ₄ + 10-25% NaCl	Up to 60°C	Excellent	Suitable for most applications.
	10-25% CuSO ₄ + 10-25% NaCl	60-80°C	Good	Limited resistance at elevated temperatures.
Other Mixtures				
Chlorine Water + Sodium Hypochlorite	10-20% Cl ₂ + 10-15% NaOCl	Up to 60°C	Good	Limited resistance; avoid prolonged exposure.
	10-20% Cl ₂ + 10-15% NaOCl	60-80°C	Fair	Significant degradation at elevated temperatures.
Formaldehyde + Water	10-37% CH ₂ O + Water	Up to 60°C	Excellent	PPH is highly resistant to formaldehyde solutions.
	10-37% CH ₂ O + Water	60-80°C	Good	Limited resistance at elevated temperatures.

STARKE PLASTICS PRIVATE LIMITED

1106, Satyamev Elite, Nr. Vakil Bridge, Bopal Approach, Ahmedabad - 380058, Gujarat, India

M: +91 90999 74166 | Email: sales@starkeplastics.com