



# Chemical Compatibility Matrix

Initial screening guide for common pipe clamp materials

Use this matrix for initial screening only. Confirm the exact fluid, concentration, temperature, exposure mode and complete assembly before selection.

Fluid / environment	PP	PA	NBR	PVDF	Metal
Mineral hydraulic oil (HLP)	B	A	A	A	A
Water-based fluid (HFA / HFC)	A	B	A	A	B
Phosphate ester fluid (HFD)	C	C	D	A	A
Steam ≤ 220 °C	D	D	D	C	A
Fuel and lubricants	B	A	A	A	A
Dilute acid, e.g. 10% HCl	B	D	C	A	D
Caustic alkali, e.g. 10% NaOH	A	B	B	B	D
Compressed air and vacuum	A	A	B	A	A
Sea water and brine	A	B	A	A	D
Cryogenic fluids, approx. -196 °C	D	D	D	D	A
Potable water, certified grades	A	A	A	A	D

A Excellent B Good C Limited — confirm project conditions D Not recommended



## How to use this matrix

Temperature	Check continuous, peak, cleaning and ambient temperatures.
Concentration	Dilution, contamination and additives can change compatibility.
Exposure	Separate splash, vapour, intermittent contact and continuous immersion.
Whole assembly	Verify body, cushion, bolts, rail, plates and coating together.

## Critical selection flags

- HFD phosphate ester: NBR is not recommended; confirm PVDF or a suitable metal assembly.
- Steam at 220 °C: polymer inserts are not suitable; use a project-approved metal assembly.
- Acids and alkalis: concentration and temperature can change ratings rapidly.
- Sea water: ordinary carbon steel corrodes rapidly; confirm stainless grade and all hardware.
- Cryogenic service: polymer inserts embrittle; use an approved low-temperature metal assembly.
- Potable water: every exposed component must meet the required certification.

Ratings are indicative and do not replace supplier chemical-resistance data, testing or project approval. Contact [info@weiqueclamps.com](mailto:info@weiqueclamps.com) for application review.