

Properties for the most common metallic thermowells

| MAX TEMPERATURE | MATERIAL DESCRIPTION | OXYGEN-RICH ENVIRONMENT | REDUCED ENVIRONMENT | SULPHUROUS ENVIRONMENT | COMMENTS |
|-----------------|---|-------------------------|---------------------|------------------------|---|
| 800°C | W.nr. 1.4301 (304) W.nr. 1.4306 (304L) | Fair | good | bad | Good resistance against organic acids, salt solutions, sulphate, sulphide and alkaline solutions at moderate temperatures |
| 800°C | W.nr. 1.4404 (316L) | Fair | good | good | Good resistance in non-oxidized acids such as acetic acid, phosphoric acid, sulphuric acid |
| 800°C | W.nr. 1.4541 (321) | Good | fair | good | Good resistance against mineral oil products, steam and flue gases |
| 800°C | W.nr. 1.4571 (316TI) | Good | fair | fair | Increased corrosion resistance against many acids, salt water and industrial fluids. |
| 1150°C | W.nr. 1.4749 (446) | Good | very good | very good | Extremely good resistance in reduced, sulphurous environments |
| 1150°C | W.nr. 1.4841 (314) | Good | fair | good | Good resistance against environments rich in sulphur and carbon |
| 1100°C | W.nr. 2.4816 (Inconel 600) | Good | fair | bad | Good resistance in oxygen-rich environments and against carbonizing. Good mechanical |
| 1140°C | Hastelloy C22 | Good | good | good | Extremely good resistance in chlorine-containing environments |
| 1120°C | Hastelloy C276 | Good | good | good | Good resistance against caustic soda, sodium hydrate and similar solutions |
| 1300°C | Pt 10% Rh (Platinum 10% Rhodium) | very good | bad | fair | Extremely good resistance in oxygen-rich environments |