

Zirconium fasteners provide excellent resistance to severe corrosion including hydrochloric, sulfuric, formic, nitric, and acetic acids. Zirconium out-performs Hastelloy in hydrochloric acid and in most concentrations of sulfuric acid. Though known for its tough corrosion resistance, zirconium bolts should not be exposed to oxidizing media such as ferric or cupric chlorides (even in low concentrations) because it will cause rapid corrosion. Zirconium is available in two grades: 702 (commercially pure) for highest corrosion and 705 (alloyed) for added impact strength.

Properties

Ultimate Tensile Strength	89 ksi 68 ksi	Grade 705 Grade 702
Yield Strength at 0.2%	73 ksi 47 ksi	Grade 705 Grade 702
Elongation %	19 29	Grade 705 Grade 702
Usable Temperature Limit	800°F / 426°C 700°F / 371°C	Grade 705 Grade 702

Key Benefits

- Excellent resistance to harsh acids including hydrochloric and sulfuric acid.
- Improved resistance over Hastelloy in many corrosive environments.
- Can rapidly corrode in the presence of oxidizing media – even in low concentrations

Chemistry & Specifications

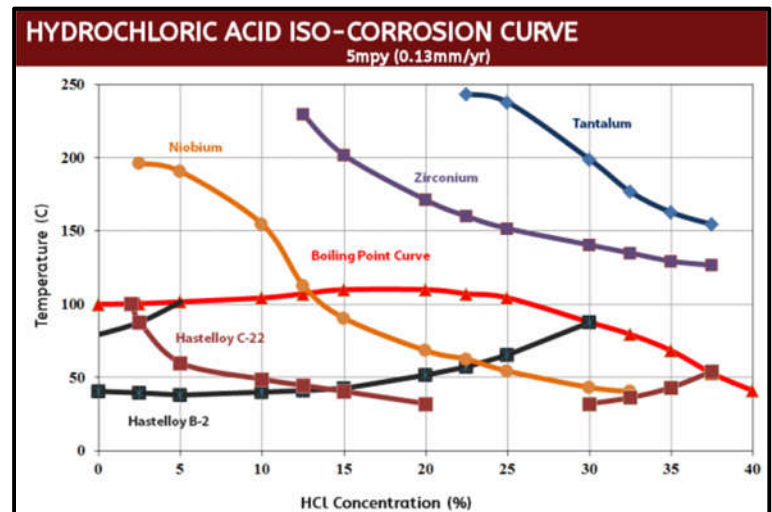
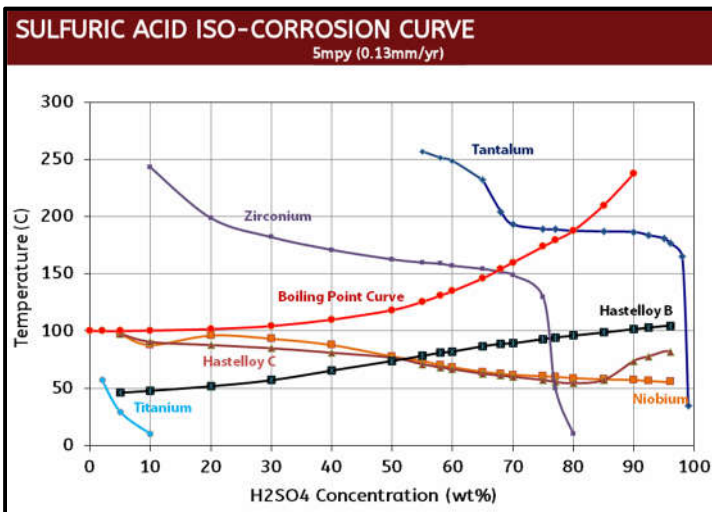
Zirconium 702	Zr	Fe/Cr
Typical %	>99.2	0.2

ZIRCONIUM 702 SPECIFICATIONS: UNS R60702, ASTM B493 AND B550, ASME SB493 AND SB550 ROD (BAR), ASTM SB551, ASME SB551 PLATE, SHEET AND STRIP

Zirconium 705	Zr	Hf	Nb	Fe/Cr
Typical %	Bal	4.5	2-3	0.20

ZIRCONIUM 705 SPECIFICATIONS: UNS R06705, ASTM B493 and B550, ASME SB493 and SB550 Rod (Bar)

Material Data



Our Engineers Are Here to Help

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