

Material type

**Metal**

Material name

**Stainless Steel 17-4 PH | 1.4542 | X5CrNiCuNb16-4**

Alternative names

**1.4542, X5CrNiCuNb16-4**

Process compatibility

**CNC machining****Mechanical properties**

Ultimate tensile strength	860 - 1400 MPa
Yield strength	580 - 860 MPa
Young's modulus (modulus of elasticity)	197 - 207 GPa
Elongation at break	3 - 16 %

**Thermal properties**

Maximum service temperature	282 - 316 °C
Thermal expansion coefficient	12.5 - 13.1 10 <sup>-6</sup> /°C
Thermal conductivity	17.3 - 18.7 W/(m·°C)

**Post treatments**

Post-Processing	Not suitable
Anodizing compatibility	Not suitable

**Physical properties**

Corrosion resistance	Excellent
Magnetism	Magnetic
UV resistance	Excellent
Weldability	Moderate

**Electrical properties**

Electrical resistivity	75 - 85 μΩ*cm
------------------------	---------------

**Common applications**

Aerospace applications
Base plates
Chemical processing equipment
Oil and petroleum refining equipment

**Nuclear components**

ZartLink is The Global First FairPrice Flex Manufacturing Platform for Future. From rapid prototyping to production, provide global clients quality parts with cheaper prices.