304L Stainless Steel

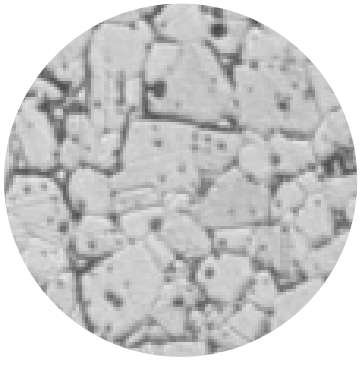
ExOne™
Collaborate. Innovate. Accelerate.

Typical Material Properties

Material Properties	Test Method	304L Stainless Steel
Tensile Strength		
Ultimate Strength	ASTM E8	X & Y: 579MPa Z: 577 MPa
Yield Strength (0.2% offset)		X & Y: 200MPa Z: 205MPa
Elongation		X & Y: 60% Z: 57%
Elastic Modulus		X & Y: 220 GPa Z: 200 GPa
Hardness	ASTM E18	75 HRB
Impact	ASTM E23	43 J
Relative Density		97%
Density		7.78 g/cc
Surface Roughness		3.0 µm Ra

304L Stainless Steel Printed Part

Material Composition			
Iron	bal	Sulfur	0.03% max
Nickel	8-12%	Manganese	2.0% max
Chromium	18-20%	Silicon	1.0% max
Carbon	0.03% max		
Phosphorus	0.045% max		



304L Stainless Steel Microstructure

Geometric Capability	
Corner Radius	Max. as design allows, .254 mm. (0.010 in.) min.
Chamfer	> .1 mm. (0.039 in.)
Wall Thickness	> 1.5 mm. (0.059 in.)
Holes	> .38 mm. (0.014 in.) depending on hole length
Accepted file formats	STL, STEP

Note: Build size 50 x 120 x 50mm.