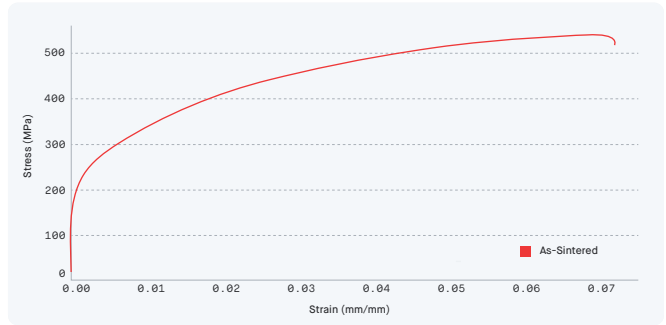


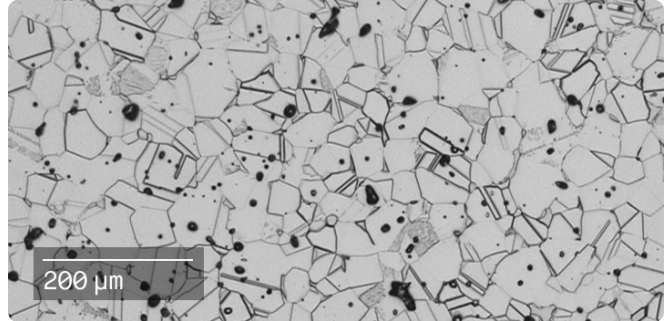
[Material Data Sheet]

# 304L Stainless Steel



**COMPOSITION %**

Fe	Balance
Cr	17.5 - 19.5
Ni	8 - 12
Mn	2 (max)
Si	1 (max)
P	0.045 (max)
S	0.03 (max)
N	0.1 (max)
C	0.03 (max)



**MECHANICAL PROPERTIES <sup>1</sup>**

	Standard	Shop System™ As-Sintered <sup>2</sup>
Ultimate tensile strength - xy (MPa)	ASTM E8M	577 ± 8
Yield strength - xy (MPa)	ASTM E8M	182 ± 4
Elongation - xy (%)	ASTM E8M	79 ± 5
Young's modulus - xy (GPa)	ASTM E111	188 ± 15
Unnotched Charpy impact energy - xy (J)	MPIF 59	215 ± 22
Hardness (HRB)	ASTM E18	68 ± 2
Density (g/cc)	ASTM B311	7.7 ± 0.06

**PERFORMANCE <sup>3</sup>**

Boil test (corrosion)	ASTM F1089	Pass
Copper sulfate test (corrosion)	ASTM F1089	Pass

**ATTRIBUTES & APPLICATIONS**

- Structural components (e.g. housings & frames)
- Jewelry & decorative items
- Fluid transfer components (e.g. manifolds)
- Food processing equipment
- Welded components & assemblies

**OTHER STANDARD DESIGNATIONS <sup>4</sup>**

- UNS S30403
- EN 1.4307
- X2CrNi18-9

1. Mechanical properties noted represent mean values +/- 1 standard deviation across Xy & Yx orientations for as-printed samples.  
 2. Sintered in an Ipsen Titan H2 graphite hot zone furnace.  
 3. Prior to corrosion resistance testing, all test samples were passivated in accordance with ASTM A967.  
 4. Listed designations are for reference purposes only. Composition and mechanical properties may vary.  
 End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.