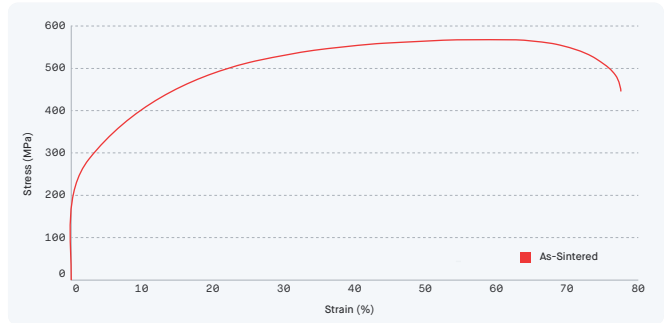


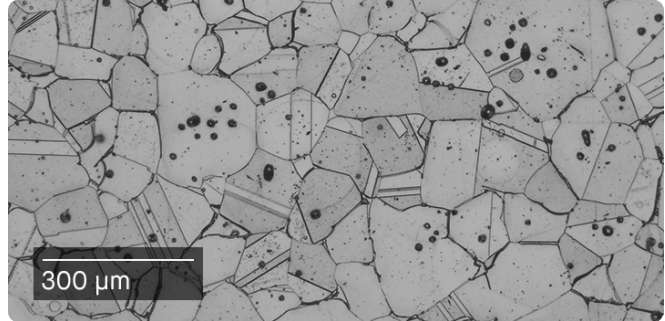
[Material Data Sheet]

# 316L Stainless Steel



**COMPOSITION %**

Fe	Balance
C	0.03 (max)
Cr	16.0 - 18.0
Ni	10.0 - 14.0
Mo	2.0 - 3.0
Mn	2.0 (max)
Si	1.0 (max)
N	0.078



**MECHANICAL PROPERTIES**

	Standard	Production System™	ASTM B883 / MPIF 35
		As-Sintered	As-Sintered
Ultimate tensile strength <sup>1</sup> (MPa)	ASTM E8	590 ± 4	450 - 520
Yield strength <sup>1</sup> (MPa)	ASTM E8	220 ± 4	140 - 175
Elongation at break (%)	ASTM E8	75 ± 3	40 - 50
Young's modulus <sup>2</sup> (GPa)	ASTM E8	-	190
Hardness (HRB)	ASTM E18	72 ± 1.0	67
Charpy Impact Strength (J)	ASTM E23	231 ± 5	-
Density	g/cm <sup>3</sup>	7.89	7.6
Surface finish <sup>3</sup> (µm Ra)	ISO 4287	3 - 8	-

**ATTRIBUTES & APPLICATIONS**

- Corrosion resistant
- Medical components for use in endoscopy & orthopedics
- Structural components (e.g. housings & frames)
- Jewelry & decorative items
- Fluid transfer components (e.g. manifolds)

**OTHER STANDARD DESIGNATIONS**

- UNS S31673
- EN 1.4404

1. YS & UTS properties noted represent mean values across Xy & Yx orientations.  
 2. Modulus available upon request.  
 3. Surface roughness measured in Z direction after sintering & sand blasting.