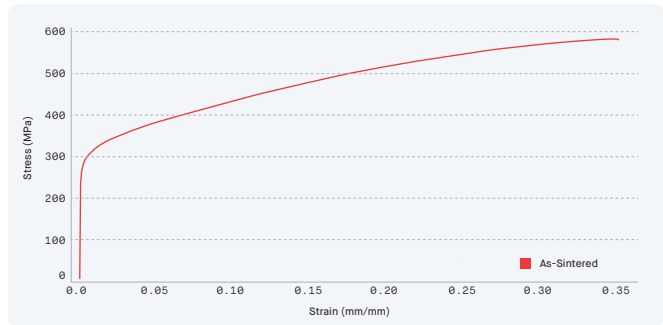


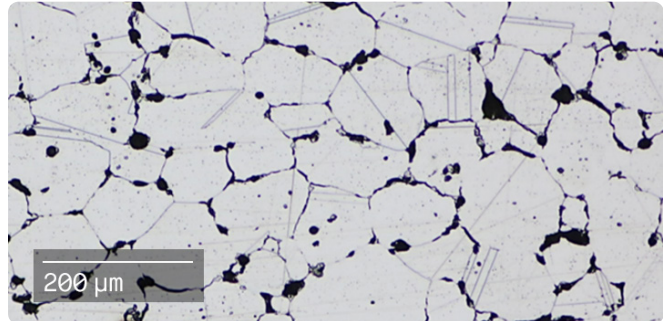
[Material Data Sheet]

# IN625 Nickel Alloy



**COMPOSITION %**

Ni	Balance
Cr	20.00 - 23.00
Mo	8.00 - 10.00
Nb	3.15 - 4.15
Fe	0.00 - 5.00
Mn	0.00 - 0.50
Si	0.00 - 0.50
Al	0.00 - 0.40
P	0.00 - 0.015
C	0.10 (max)
Co	0.00 - 1.00
Ti	0.00 - 0.40
S	0.00 - 0.015



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

	Standard	Shop System™ As-Sintered	Shop System™ Sintered and HIP <sup>2</sup>
Ultimate tensile strength – xy (MPa)	ASTM E8M	595 ± 20	661 ± 38
Yield strength – xy (MPa)	ASTM E8M	287 ± 5	303 ± 7
Elongation – xy (%)	ASTM E8M	35 ± 3	42 ± 9
Young's modulus – xy (GPa)	ASTM E111	204 ± 22	204 ± 22
Hardness (HRB)	ASTM E18	77 ± 2	82 ± 2
Density (g/cc)	ASTM B311	8.2 ± 0.05	8.43 ± 0.02

**ATTRIBUTES & APPLICATIONS**

- Excellent fatigue, thermal fatigue, oxidation & corrosion resistance
- High tensile, creep and rupture strength
- Heat-treatable and weldable material
- Aerospace components (e.g. nozzles, combustion and burner systems)
- Corrosive environment (e.g. marine, power generation, chemical processing applications)
- Oil & gas components (e.g. deep sea drilling rig components)

**OTHER STANDARD DESIGNATIONS <sup>3</sup>**

- UNS N06625
- AMS 5666F
- DIN NiCr22Mo9Nb

1. Mechanical properties noted represent mean values +/- 1 standard deviation across Xy & Yz orientations for as-printed samples.  
 2. Samples were hot isostatic pressed at 2125°F and 14.75 ksi for 240 minutes.  
 3. 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.