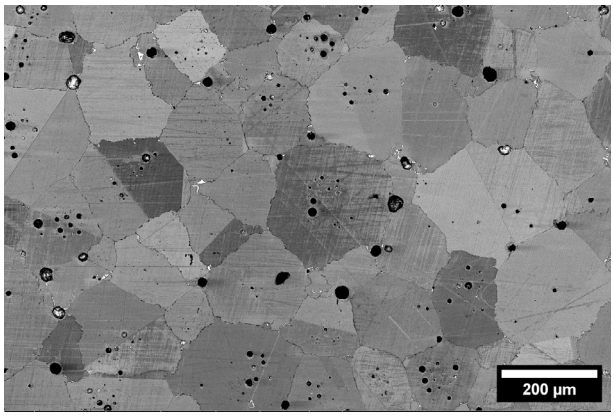
IN 625
Nickel Superalloy

RAPIDIA

COMPOSITION

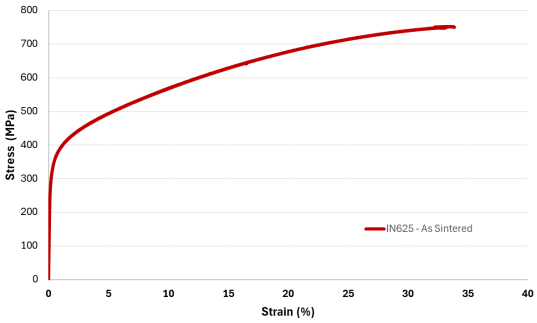
ELEMENT	AMOUNT (WT%)
Nickel	Bal.
Chromium	20-23
Molybdenum	8-10
Iron	5 (max)
Niobium	3.15-4.15
Cobalt	1 (max)
Manganese	0.5 (max)
Silicon	0.5 (max)
Aluminum	0.4 (max)
Titanium	0.4 (max)
Carbon	0.1(max)
Phosphorus	0.015 (max)
Sulfur	0.015 (max)



MECHANICAL PROPERTIES

	STANDARD	WROUGHT AMS 5599[1]	**RAPIDIA AS-SINTERED**
Ultimate Tensile Strength (MPa)	ASTM E8	830	**750**
Yield Strength (MPa)	ASTM E8	410	**340**
Elongation at Break (%)	ASTM E8	30	**34**
Hardness (HRB)	ASTM E18	96	**82-84**
Corrosion Resistance[2]	ASTM F1089	Pass	**Pass**
Relative Density (%)[3]	ASTM B311	100	**97**

[1] Minimum values for wrought AMS 5599.
[2] Assessed by boil test and copper sulfate test.
[3] Based on a theoretical density of 8.44 g/cc.



All data represents samples with ~10 mm printed and ~6 mm after machined thickness - sintered in around 12 hours using Rapidia's F2 Vacuum Furnace. All characterization was performed in-house at Rapidia. Values listed are the samples printed in the XY-plane. Values for samples printed along the Z-axis can be lower depending on print quality. Note that material performance is influenced by numerous factors such as print quality, furnace loading, and part thickness and geometry.