

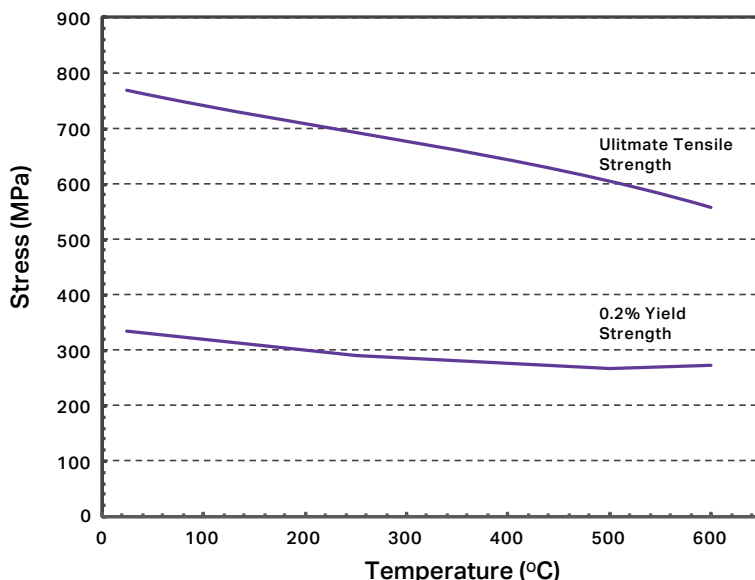
## MATERIAL DATASHEET

# Inconel 625

Other Designations: UNS N06625, ISO NW6625, DIN 17744

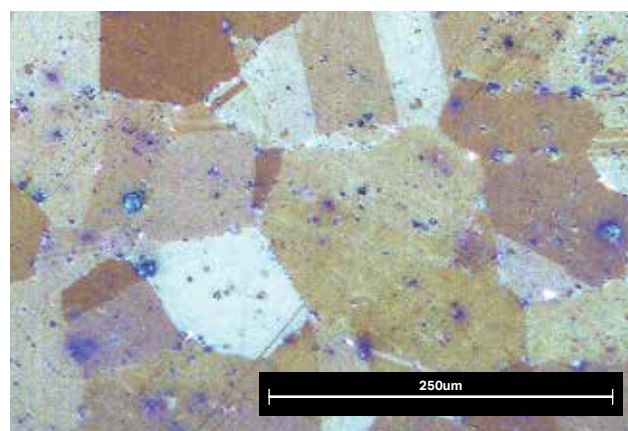
Inconel 625 is a nickel-chromium based superalloy that is highly resistant to corrosion and high temperatures. It's easy to print; allowing you to make functional prototypes and end-use parts for harsh environments. Markforged Inconel 625 meets chemical requirements of ASTM B443.

Composition	Amount
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
Nickel	bal



## Markforged Inconel 625 As-Sintered

Inconel 625 printed on the Metal X, washed in the Wash-1, and sintered in the Sinter-1. As-Sintered microstructure captured at 100x is pictured to the right.



Typical Mechanical Properties	Standard	Markforged As-Sintered	Wrought AMS 5599 <sup>1</sup>
Ultimate Tensile Strength	ASTM E8	765 MPa	827 MPa
0.2% Yield Strength	ASTM E8	334 MPa	414 MPa
Elongation at Break	ASTM E8	42%	30%
Hardness	ASTM E18	7 HRC	0-19 HRC
Relative Density <sup>2</sup>	ASTM B923	96.5%	100%

1. Wrought AMS 5599 data represent minimum values, except for Hardness.

2. Relative density for Inconel 625 assumes a reference density of 8.44 g/cm<sup>3</sup>.

3. ASTM E21 elevated temperature testing was conducted by 3rd party NADCAP lab. Samples were printed in XY and gauge length was machined to size.

These data represent typical values for Markforged Inconel 625 as-sintered. Markforged samples were printed as fully dense parts with 100% infill. Hardness and density data were tested in house, and all other data were tested and confirmed by outside sources. These representative data were tested, measured, or calculated using standard methods and are subject to change without notice. Markforged makes no warranties of any kind, express or implied.