IN625-RAM2 (High Temperature Strength and Corrosion Resistant)

Product Information

Elementum 3D's IN625-RAM2 nickel superalloy offers excellent mechanical strength and creep resistance at high temperatures, good surface stability, and corrosion and oxidation resistance, while maintaining high strength, hardness and wear. IN625-RAM2 is targeted towards aerospace and power industry applications such as turbine blades and jet/rocket engines, industrial gas turbines heat exchangers and nuclear components.

Physical and Chemical Properties

Material composition: Proprietary IN625 w/2% ceramic

Printed density: 8.19g/cc

Relative density: > 99.5%

Hardness: 34 HRC

Depositions rate: 0.934 in^3/hr (4.24 mm^3/s)

Surface roughness as built:

Upskin - Ra 8.2 µm (3.22 x 10^{-4} in.)

Downskin - Ra 9.7 µm (3.81 x 10^{-4} in.)

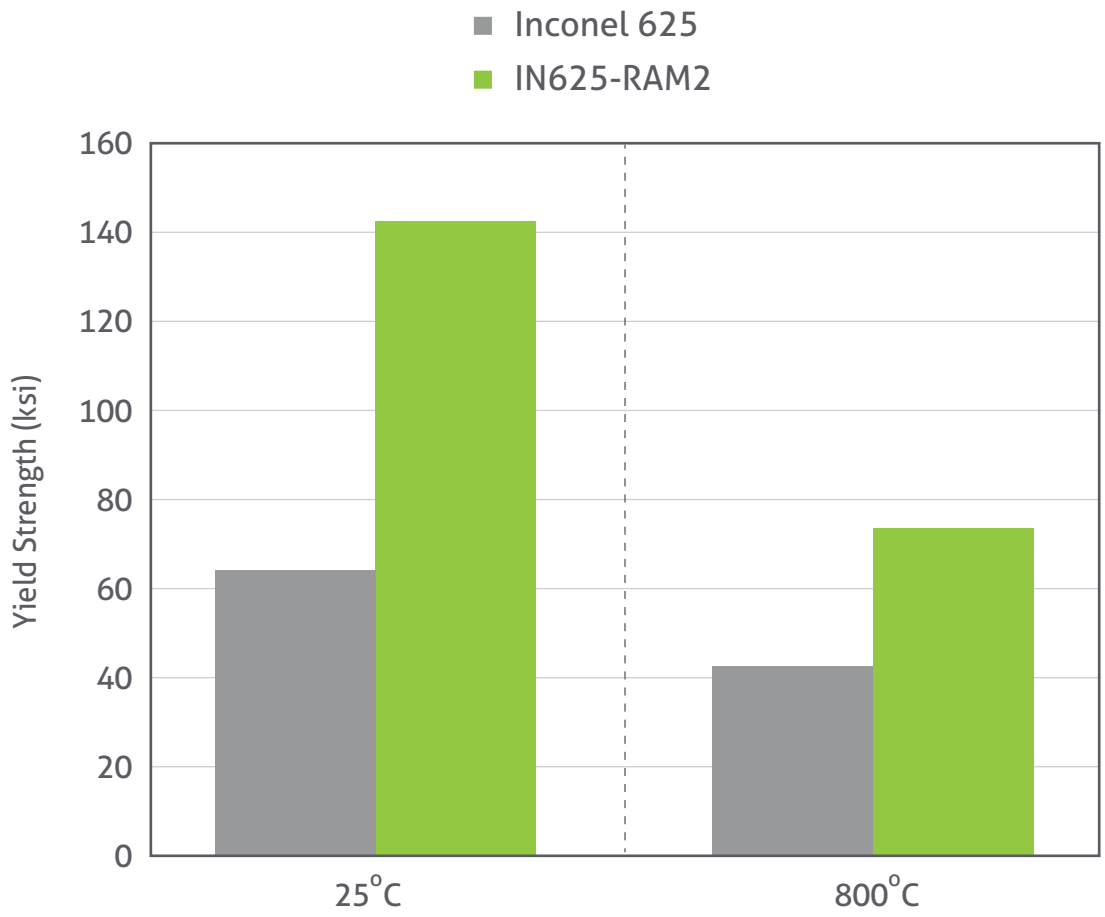
Testing temperature		Ultimate tensile strength		Yield strength		Modulus of elasticity		Elongation
C	F	MPa	ksi	MPa	ksi	GPa	Msi	%
25°	77°	*1303	189	*993	144	*200	29.0	23
800°	1472°	**538	78	**503	73	**149	21.7	91
980°	1796°	**276	40	**124	18	**90	13.0	75

All stated values are approximate values. All details given above are our current knowledge and experience, and are dependent on the equipment, parameters and operating conditions. The data provided in this document is subject to change and only intended as general information on a material set that is continually improving and developing. The data does not provide a sufficient basis for engineering parts. All samples were produced on an EOS M290. All tensile tests were performed at third party certified test labs such as Westmoreland Mechanical Testing & Research.

Please contact us at jacob@elementum3d.com for additional information.

*ASTM E8, **ASTM E21

Yield Strength at Temperature



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