

► A7075-RAM2 (High Strength)

Product Information

Elementum 3D's A7075-RAM2 is an aerospace and specialty AM aluminum alloy that offers very high strength. Aluminum 7075 is a structural aluminum alloy for applications that require very high strength and light weight.

Physical and Chemical Properties

Material composition: Proprietary A7075 w/2% ceramic (E3D- HIP and T6 Condition)

Maximum theoretical density: 2.84 g/cm³ >99.2% as built (>99.9% after HIP)

Printed relative density: > 99.5%

Ultimate tensile strength^[1]: 84±2 ksi (579 MPa)

Yield strength^[1]: 81±2 (558 MPa)

Elongation^[1]: 6±1 %

Hardness^[2]: 93 ± 3 HRB

Modulus of elasticity^[3]: 11.1 ± 0.2Msi (76GPa)

Deposition rate^[4]: 1.3 in³/hr (5.99mm³/s)

All stated values are approximate values and are compared to the wrought property values listed, sourced from ¹<http://asm.matweb.com/search/SpecificMaterial.asp?bassnum=MA7075T6>, on 08/09/2019.

^[1]ASTM E8, ^[2]ASTM E18, ^[3]ASTM E494-15 (ultrasonic velocity), ^[4]Deposition rate calculation is for comparison purposes on an EOS M290 and does not include recoating time, laser migration time, contour exposures, etc.

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 and Product Evaluations Systems.

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