

OUTSTANDING ADDITIVE SOLUTION FOR STRUCTURAL & CRITICAL METAL COMPONENTS

ALUMINUM 2024x

LIGHTNESS
(Density 2,82 g/cc)

STRENGTH
(UTS 482 MPa)

STIFFNESS
(E Modulus 78 GPa)

YOUR NEXT GENERATION ALUMINUM PRODUCT



Aerospace



Energy



Automotive



Mechanics

- ✓ Al 2024x is an engineered aluminum – ceramic alloy with a patented process (Reactive Additive Manufacturing);
- ✓ Al 2024x is “ready to print” with the most popular printers;
- ✓ Al 2024x has been created for aeronautic and automotive/racing applications;
- ✓ Al 2024x has minimal performance loss at 150 °C and still performing over expectations at 300 °C

ADDED VALUE

the ductility and toughness of metals, the strength and stiffness of ceramic

COST EFFICIENCY

faster production speed (deposition rate up to 7,8 mm³/s) and reduced part cost

NEW HIGH PERFORMANCE ALUMINUM POWDER AVAILABLE AND DEVELOPED FOR ADDITIVE MANUFACTURING

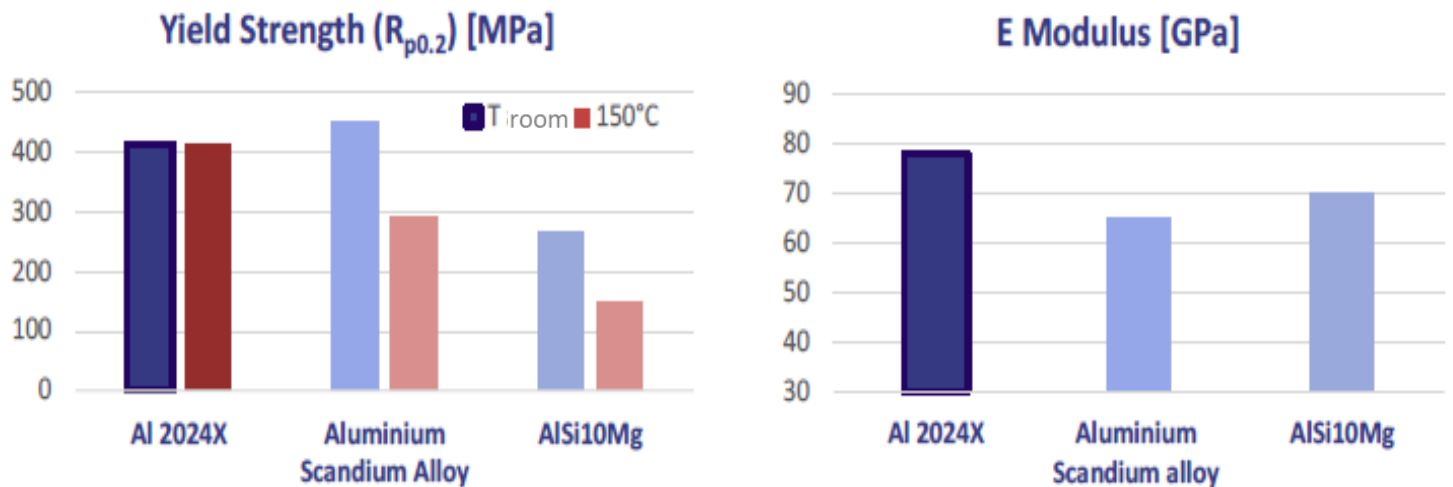
Physical and Chemical Properties

Density	2,82 g/cc
Relative Density	> 99,8%
Ultimate tensile strength	Approx. 70 ksi (482 MPa)
Yield Strength	Approx. 58 ksi (400 MPa)
Elongation	~ 10%
Hardness	82 ± 2 HB
Modulus of elasticity	Approx. 78 GPa
Deposition rate (up to)	7,8 mm ³ /s

Mechanical Properties of the Part

FATIGUE BEHAVIOUR:

Fatigue test results better than Al 2024-T6 (part manufactured by subtractive methods). Fatigue strength at 10 Million cycles is more than 140 MPa.




All values shown are approximate. All the above details are our current knowledge and experience and depend on the equipment, parameters and operating conditions. The data provided in this document are subject to changes and intended only as general information on a constantly improving and developing material set. The data do 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.

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