

DATA SHEET: LASER MELTING MATERIAL STAINLESS STEEL 316L (1.4404)

Powder composition / percent by mass

C	Mn	S	Ni	Cu	Si	P	Cr	Mo	Fe
<0.03	<2.00	<0.01	12.5 to 13.0	<0.50	<0.75	<0.025	17.5 to 18.0	2.25 to 2.50	Balance

Material Properties

- High hardness and toughness
- High corrosion resistance
- Good machine-ability
- Can be highly polished

Applications

- Plastic injection and pressure die-casting moulds
- Medical implants
- Surgical tools
- Cutlery and kitchenware
- Maritime components
- Spindles and screws
- General engineering

Mechanical data mass	As-built ^a		Test / ISO standard where applicable
	Minimum	Maximum	
Yield strength	500 MPa	500 MPa	BS EN ISO 6892-1:2009
Ultimate tensile strength	650 MPa	700 MPa	BS EN ISO 6892-1:2009
Hardness (HRC)	22		< BS EN ISO 6507-1:1998
Thermal conductivity at 20°C	-	-	-
Surface roughness R _a X, Y	-	-	-
Surface roughness Ra Z	6 µm	8 µm	JIS B 0601-2001 (ISO 97)

[a] 50 µm layers on AM250.

Values quoted are typical values for the AM process.

All information is based on results gained from experience and tests and is believed to be accurate but is given without acceptance of liability for loss or damage attributable to reliance thereon. Users should always carry out sufficient tests to establish the suitability of any products for their intended applications.

No guarantees of machine performance are expressed or implied by these data and Renishaw reserves the right to update them at any time.