

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	As-built ^a		Test / ISO standard where applicable
	Minimum	Maximum	
Yield strength	500 MPa	600 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 R _a 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.