Offshore STAINLESS & ALLOYS

PRODEC® 316/316L

Stainless steel grades engineered for **improved machinability**, **extended tool life**, and **consistent component quality**

MADE IN THE UK

An **enhanced** version of 316L/4404 engineered for improved machinability.

Increasing productivity through higher machining speeds, extended tool life, tighter dimensional tolerances, improved surface finish, and higher yields compared with conventionally produced 316L/4404.

+20% Cutting Speed on **316L**
Vs Top Competitors

+159% Longer **TOOL LIFE**
Compared To Lowest European Test Result

While increased machinability has historically been linked to reduced corrosion performance, **PRODEC 316/316L maintains corrosion resistance within the standard range expected for 316L stainless steel**.

The material is commonly dual certified as both 316L and 316, meeting the low carbon requirement of 316L alongside the higher strength characteristics of 316.

PRODEC 316/316L is suitable for welding using conventional processes, excluding oxyacetylene. Recommended filler metals include AWS E316L or ER316L, or other low carbon grades with a molybdenum content exceeding that of the base material.

Chemical composition

Material	EN	ASTM		PRE	Typical chemical composition, % by mass					
		TYPE	UNS		C	Cr	Ni	Mo	N	Others
PRODEC® 316L/4404	1.4404	316L	S31603	24	0.02	17.2	10.1	2.1	–	–

Pitting Resistance Equivalent is calculated using the following formula: PRE = %Cr + 3.3 x %Mo + 16 x %N
Surface finish and other factors determine the actual corrosion resistance of a particular product. Composition is given as % by mass.

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Part of the Langley Alloys Group

Mechanical properties

Metric					
Material	Product Form	Min. yield strength $R_{p0.2}$ (MPa)	Tensile strength R_m (MPa)	Elongation A_5 (%)	Hardness (HBW) max.
PRODEC® 316L / 4404	Hot Rolled Bar	200	500/700	40/30	215
PRODEC® 316L / 4404	Cold Drawn Bar	400/380/200	600-930/580-930/500-830	25/25/30	-

Minimum values for Hot rolled bars and Cold drawn bars according to EN 10088-3.5) HB max

Physical properties

Metric						
Material	Density (kg/dm³)	Modulus of elasticity at 20 °C (GPa)	Coefficient of thermal expansion 20–100 °C (10^{-6}/K)	Thermal conductivity at 20 °C (W/(m*K))	Thermal capacity at 20 °C (J/(kg*K))	Electrical resistivity at 20 °C (Ω*mm²/m)
PRODEC® 316L / 4404	8.0	200	16.0	15	500	0.75

Imperial						
Material	Density (lbm/in³)	Modulus of elasticity (psi)	Coefficient of thermal expansion 68-212v°C(µin/(in* °F))	Thermal conductivity (Btu/(hr*ft* °F))	Thermal capacity (Btu/(lbm* °F))	Electrical resistivity at (µΩ*in)
PRODEC® 316L / 4404	0.289	29 * 10^6	8.89	8.7	0.119	29.53

Values according to EN 10088-1.

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Supporting UK Manufacturing

All PRODEC Stainless Steel supplied by Offshore Stainless is manufactured in the UK

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