



THAMES
STOCKHOLDERS

316 / 316L Stainless

STAINLESS STEEL WITH ADDED MOLYBDENUM

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Product Overview

Introducing molybdenum in the alloying process improves the corrosion resistance of **316 stainless steel**.

It is very similar to Type 304 and is almost as commercially popular – the main differences are that the alloy is stronger at elevated temperatures, and corrosion resistance is better, especially in chloride environments. The alloy offers excellent weldability, machinability and pitting resistance. Typical use includes the fabrication of pressure vessels and heat exchangers.

About Type 316L

Type 316L is a low-carbon version of Type 316 which minimizes carbide precipitation due to welding.

Key Features

- Improved corrosion resistance when compared to 304
- More suitable for chloride environments
- Good machinability
- 316 is stronger than 304 at elevated temperatures

Applications

- Pressure vessels
- Chemical containers, food preparation equipment
- Furnace parts, valves and pumps
- Heat exchangers

* Chemical Composition (weight, %)

	C	Cr	Mo	Si	P	S	Ni	Mn	N	Fe
Min.		16.50	2.00				10.00			Bal
Max.	0.07	18.50	2.50	1.00	0.045	0.030	13.00	2.00	0.10	Bal

* Properties as per BS EN 10088-3, 1.4401

* Mechanical Properties

Tensile strength	500 - 700	MPa
Proof Stress	200 min	MPa
Elongation A5	40 min	%

* Properties as per BS EN 10088-3, 1.4401 (sizes up to 160mm)

Physical Properties

Density	8.00	kg/m ³
Melting Point	1400	°C
Modulus of Elasticity	193	GPa
Electrical Resistivity	0.074	x10 ⁻⁶ Ω.m
Thermal Conductivity	16.3	W/m.K
Thermal Expansion	15.9	x10 ⁻⁶ /K



Thames Stockholders

Unit 5W, Woodall Road, Redburn Industrial Estate
Ponders End, Enfield, Middlesex EN3 4LQ

Tel: +44 (0)20 8805 3282



sales@thamesstock.com



www.thamesstock.com

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