



UNS S31254 Stainless Steel

UNS S31254 is a grade of stainless steel that belongs to the super-austenitic family of stainless steels. It is commonly referred to as 254SMO, which is a trademarked name for this material. It is designed for environments that are highly corrosive, such as marine and chemical processing industries. It has excellent strength and toughness, even at elevated temperatures, and performs well in harsh environments where other stainless steels may fail.

UNS S31254 is used in a wide range of critical applications such as Marine Equipment, Chemical Process Equipment & Offshore Oil & Gas.

UNS S31254 Stainless Steel Grades & Equivalents:

- ASTM A276 S31254
- ASTM A479 S31254
- ASTM A193 B8MLCuN
- ASTM A182 F54
- UNS S31254

Typical Chemical Analysis

C	Si	Mn	P	S	Cr	Ni	Mo
0.020	0.80	1.00	0.030	0.010	19.5-20.5	17.5-18.5	6.0-6.5
W	N	Cb/Nb	Ti	Co	Cu	Al	B
	0.18-0.25				0.50-1.0		
V	Fe	Mg	Ta	Ca	O	Bi	Se
Sn	Zn	Pb	Y	Cb/Nb + Ta	Ni + Co	H	PREN

** Carbon content for 304L / BS970 304S11 shall be $\leq 0.030\%$

Typical Mechanical Properties

Tensile Strength	650 N/mm ² min
0.2% Proof Stress	300 N/mm ² min
Elongation	35%
Reduction of Area	50%
Hardness	
Impacts	
Stress Rupture	
Other Remarks	Mechanicals may vary slightly depending on specification (above taken from ASTM A276)

Product Forms Available:

- Hexagon Head Bolts
- Hexagon Nuts
- Studbolts
- Socket Capscrews
- Socket Countersunk Screws
- Socket Setscrews
- & Many other special fasteners and bespoke machined parts

Products can be produced to customer drawings or relevant British (BS), American (ASME, ANSI), European (DIN, UNI) or International Standards (ISO).

The size ranges M3 to M120 Metric and 3/16" to 4.75" Imperial can be supplied. Thread forms include UNC, UNS, UNF, BSW, BSF, Whitworth, Metric, Metric Fine.



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