

STAINLESS STEEL
AUSTENITIC GRADE _ FOR WELDING
DSM 1.2.9

Austenitic: (300 series) 18/8

- Highest corrosion resistance.
- Non-magnetic & Non hardening.
- Can be welded
- Max. service temp. 400°C

Definition:

316L Austenitic Stainless Steel: is a low carbon (good for welding) variant formulated with additional molybdenum to provide better corrosion resistance, in particular to 'pitting', and to increase tensile strength at elevated temperatures.

Features:

Used extensively for weldments where its resistance to chromium depletion (Sensitization) zones at the weld area assures optimum corrosion resistance.

Cold working of this type causes this alloy to gain magnetic properties; post fabrication annealing is required to recover its non- magnetic condition.

Non-hardenable by heat treatment,

ASM (DEK) Applications:

Fabrications

These values are representative and should not be considered as definitive. For critical applications, refer to material data-sheet.

TYPICAL MECHANICAL PROPERTIES @25°C	
DENSITY:	8000 Kg/m ³
YOUNGS MODULUS:	200 GPa
POISSONS RATIO:	0.30
YIELD STRENGTH	310 MPa (≤ 12,7 Dia)
TENSILE STRENGTH	620 MPa (≤ 12,7 Dia)

Issue	01	02	03	04	05	06	07	08	09
DCR	44682	44841							



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CHEMICAL ANALYSIS		BENEFIT
Chrome	16.5/18.5	Combines with Ni: high temp corrosion resistance.
Nickel	11.0/ 14.0	high strength work hardening, without ductility loss
Molyb	2.0/ 2.5	Improves corrosion resistance
Carbon	0.03 max	Good for welding.
Mang.	2.0 max	Improves high temperature ductility.
Silicon	1.0 max	Improves wear resistance & elastic limit.
Sulphur	0.35 max	Good for machining.

CURRENT INTERNATIONAL SPECIFICATION COMPARISON	
GERMAN: DIN	X2CrNiMo18-14-3
AMERICAN: AISI	316L
EUROPEAN STEEL No.	1.4435
JAPANESE GRADE	JIS G SUS 316L
CHINA GRADE	GB 00Cr17Ni14Mo2

REPLACES

BS970 1955	BS970 1991	COLOUR CODE		DESCRIPTION
EN58J	316S11			Austenitic Stainless Steel

Alternatives:

Alternative materials are allowed only with the express written permission of ASMPT. Please email details of your request to engineering_enquiries@asmpt.com

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STAINLESS STEEL**AUSTENITIC GRADE _ FOR WELDING****DSM 1.2.9**

These sizes are given in good faith and should not be considered as definitive

Rounds (mm)

3	4	5	6	8	10	12	14	15	16
18	20	24	25	30	32	35	40	45	50
60	185	340							

Squares (mm)

12	16	20	25	30	40	50
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Hexagons (mm)

5	7	17
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SHEET SIZE (mm)			
THICK	2000 x 1000	2500 x 1250	3000 x 1500
0.7	✓	✓	
0.9	✓	✓	
1.0		✓	
1.2	✓	✓	✓
1.5	✓	✓	✓
2.0	✓	✓	✓
2.5	✓	✓	✓
3.0	✓	✓	✓

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