Product Reference Manual

Stainless Steel Bar & Sections

SOE MYINT & SONS Co.,Ltd.

ATLAS 304 : Stainless Steel Bar

RELATED SPECIFICATIONS

Grade	UNS No	British BS	Euronorm		Swedish SS	Japanese JIS
			No	Name		
304	S30400	304S31	1.4301	X5CrNi18-10	2332	SUS 304
304L	S30403	304S11	1.4306	X2CrNi19-11	2352	SUS 304L

CHEMICAL COMPOSITION

Grade	C	Mn	Si	P	S	Cr	Mo	Ni	N
304	≤0.08	≤2.0	≤1.00	≤0.045	≤0.030	18.0-20.0		8.0-11.0	
304L	≤0.03	≤2.0	≤1.00	≤0.045	≤0.030	18.0-20.0		8.0-12.0	

CONDITIONS OF SUPPLY – SPECIFIED MECHANICAL PROPERTIES

Diameter (mm) or Thickness	Tensile Strength (MPa) min	0.2% proof stress (MPa) min	Elongation (% in 50mm) min	Reduction of Area (%) min
≤12.70	520	310	30	40
>12.70	515	205	30	40

CONDITIONS OF SUPPLY – SPECIFIED MECHANICAL PROPERTIES

Density (kg/m^3)	Elastic Modulus (GPa)	Mean Coefficient of Thermal Expansion			Thermal Conductivity		Specific Heat 0-100°C (J/kg.K)	Electrical Resistivity (nΩ.m)
		0-100°C (mm/m/°C)	0-315°C (mm/m/°C)	0-538°C (mm/m/°C)	at 100°C (W/m.K)	at 500°C (W/m.K		
7900	193	17.2	17.8	18.4	16.3	21.5	500	720

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ATLAS 316 : Stainless Steel Bar

RELATED SPECIFICATIONS

Grade	UNS No	British BS	Euronorm		Swedish SS	Japanese JIS
			No	Name		
316	S31600	316S31	1.4401	X5CrNiMo17-12-12	2347	SUS 316
316L	S31603	316S11	1.4404	X2CrNiMo17-12-12	2348	SUS 316L

CHEMICAL COMPOSITION

Grade	C	Mn	Si	P	S	Cr	Mo	Ni
316	≤0.08	≤2.0	≤1.00	≤0.045	≤0.030	16.0-18.0	2.0-3.0	10.0-14.0
316L	≤0.03	≤2.0	≤1.00	≤0.045	≤0.030	16.0-18.0	2.0-3.0	10.0-14.0

CONDITIONS OF SUPPLY – SPECIFIED MECHANICAL PROPERTIES

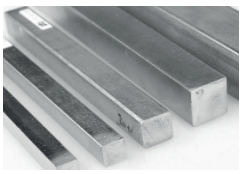
Diameter (mm) or Thickness	Tensile Strength (MPa) min	0.2% proof stress (MPa) min	Elongation (% in 50mm) min	Reduction of Area (%) min
≤12.70	620	310	30	40
>12.70	515	205	30	40

CONDITIONS OF SUPPLY – SPECIFIED MECHANICAL PROPERTIES

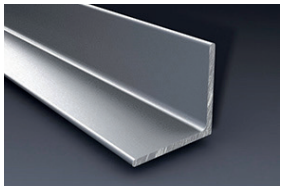
Density (kg/m^3)	Elastic Modulus (GPa)	Mean Coefficient of Thermal Expansion			Thermal Conductivity		Specific Heat 0-100°C (J/kg.K)	Electrical Resistivity (nΩ.m)
		0-100°C (mm/m/°C)	0-315°C (mm/m/°C)	0-538°C (mm/m/°C)	at 100°C (W/m.K)	at 500°C (W/m.K		
8000	193	15.9	16.2	17.5	16.3	21.5	500	740



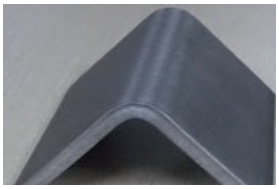
Round Bar ASTM-A276 / A 555	
AISI-304/316	
Polished Finish	
Length = 6 meter	
SIZE	
Inch	mm
1/8	3.2
3/16	4.8
1/4	6.4
5/16	7.9
3/8	9.5
1/2	12.7
5/8	15.9
3/4	19.1
7/8	22.2
1	25.4
1 1/4	31.8
1 1/2	38.1
1 3/4	44.5
2	50.8
2 1/2	63.5
3	76.2
3 1/2	88.9
4	101.6
4 1/2	114.3
5	127.0
5 1/2	139.7
6	152.4
6 1/2	165.1
7	177.8



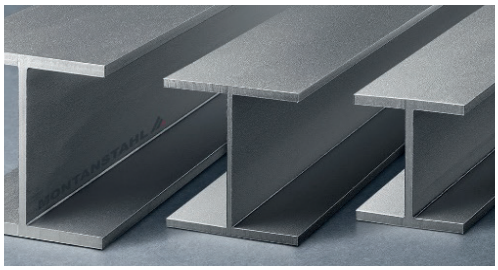
Square Bar ASTM-A276	
AISI-304/316	
Polished Finish	
Length = 6 meter	
SIZE	
Inch	mm
1/8	3.2
3/16	4.8
1/4	6.4
5/16	7.9
3/8	9.5
1/2	12.7
5/8	15.9
3/4	19.1
7/8	22.2
1	25.4
1 1/4	31.8
1 1/2	38.1
1 3/4	44.5
2	50.8
2 1/2	63.5
3	76.2
3 1/2	88.9
4	101.6
4 1/2	114.3



Angle Bar ASTM-A276		
AISI-304/316		
No.1 Finish		
Length = 6 meter		
SIZE		THICKNESS
mm	mm	mm
20.00	20.00	3.00
25.00	25.00	3.00
		5.00
		6.00
30.00	30.00	3.00
		4.00
		5.00
		6.00
40.00	40.00	3.00
		4.00
		5.00
		6.00
50.00	50.00	3.00
		4.00
		5.00
		6.00
65.00	65.00	5.00
		6.00
75.00	75.00	5.00
		6.00
		8.00
100.00	100.00	5.00
		6.00
		8.00



Bend Angle ASTM-A276		
AISI-304/316		
No.1 Finish		
Length = 6 meter		
SIZE		THICKNESS
mm	mm	mm
20.00	20.00	3.00
25.00	25.00	3.00
		5.00
		6.00
30.00	30.00	3.00
		4.00
		5.00
		6.00
40.00	40.00	3.00
		4.00
		5.00
		6.00
50.00	50.00	3.00
		4.00
		5.00
		6.00
65.00	65.00	5.00
		6.00
75.00	75.00	5.00
		6.00
		8.00
100.00	100.00	5.00
		6.00
		8.00



WELDED H BEAM ASTM-A276		
AISI-304/316		
No.1 Finish		
Length = 6 meter		
WEB	FLANGE	THICKNESS
mm	mm	mm
50.00	50.00	4.00
60.00	60.00	4.00
80.00	80.00	4.00
100.00	100.00	4.00

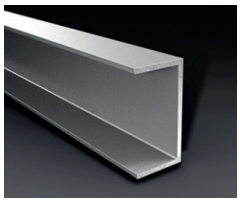
WELDED I BEAM ASTM-A276		
AISI-304/316		
No.1 Finish		
Length = 6 meter		
WEB	FLANGE	THICKNESS
mm	mm	mm
80.00	40.00	4.00
100.00	50.00	4.00
150.00	80.00	4.00



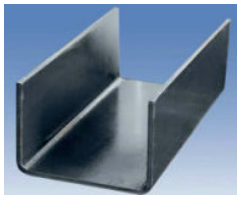


Flat Bar ASTM-A276 / A 240				
AISI-304/316				
Finish= No.1 / HL				
Length = 6 meter				
WIDTH	THICKNESS		WIDTH	THICKNESS
mm	mm		mm	mm
12.00	3.00		65.00	3.00
	6.00			4.00
20.00	3.00			5.00
	5.00			6.00
	6.00			8.00
	10.00			10.00
25.00	3.00			12.00
	4.00		75.00	4.00
	6.00			5.00
	8.00			6.00
	10.00			8.00
	12.00			10.00
30.00	3.00			12.00
	5.00		100.00	6.00
	6.00			8.00
	8.00			10.00
	10.00			12.00
	12.00		150.00	6.00
40.00	3.00			8.00
	4.00			10.00
	5.00			12.00
	6.00		200.00	6.00
	8.00			8.00
	10.00			10.00
50.00	3.00			12.00
	4.00			16.00
	5.00			20.00
	6.00		250.00	6.00
	8.00			8.00
	10.00			10.00
	12.00			12.00
				16.00
				20.00

Hollow Bar (Bush Pipe) ASTM-A276						
AISI-304/316						
No.1 Finish						
Length = 6 meter						
SIZE RANGE						
ID		OD	ID		OD	THICKNESS
Inch		Inch	mm		mm	mm
1 3/8	x	2.00	34.93	x	50.80	7.94
3 1/4	x	4	82.55	x	101.60	9.53
4 1/4	x	5	107.95	x	127.00	9.53
3 1/4	x	4 1/2	82.55	x	114.30	15.88
3 1/2	x	4 1/2	88.90	x	114.30	12.70
3 7/8	x	4 7/8	98.43	x	123.83	12.70
4 7/8	x	5 7/8	123.83	x	149.23	12.70
5 1/2	x	6 1/2	139.70	x	165.10	12.70
5 3/4	x	7	146.05	x	177.80	15.88
6	x	7	152.40	x	177.80	12.70
6 7/8	x	7 7/8	174.63	x	200.03	12.70
7	x	8	177.80	x	203.20	12.70
8 5/8	x	9 5/8	219.08	x	244.48	12.70
9 5/8	x	10 5/8	244.48	x	269.88	12.70
9 7/8	x	10 1/2	250.83	x	266.70	7.94



Channel ASTM-A276		
AISI-304/316		
No.1 Finish		
Length = 6 meter		
WEB	FLANGE	THICKNESS
mm	mm	mm
50.00	25.00	6.00
80.00	40.00	6.00
100.00	50.00	6.00
125.00	60.00	6.00
150.00	80.00	6.00
250.00	100.00	6.00



Bended Channel ASTM-A276		
AISI-304/316		
No.1 Finish		
Length = 6 meter		
WEB	FLANGE	THICKNESS
50.00	25.00	4.00
80.00	40.00	4.00
100.00	50.00	4.00
125.00	60.00	4.00
150.00	80.00	4.00