COIL, SHEET & PLATE
DIMENSIONS
ASTM-A240

PRODUCT	AISI	THICKNESS (mm)	Width (mm)	Length (mm)
HOT ROLLED				
Hot rolled coils (N1)	201,202,301,304,304L	3.00 - 12.70 2.51 - 2.99 2.00 - 2.50	600 - 1250	
	316,316L,321,310S	4.00 - 12.70 3.00 - 3.99	600 - 1524 600 - 1250	
Hot rolled sheets (N1)	201,202,301,304,304L	3.00 - 50.00	1219 1524	6096
	316,316L,321,310S	3.00 - 12.70	1219 1524	
Hot rolled slits (N1)	201,202,301,304,304L	2.00 - 6.00 6.00 - 8.50 8.00 - 10.00	71 - 600 100 - 600 300 - 600	
	316,316L,321,310S	3.00 - 6.00 6.00 - 8.50 8.50 - 10.00	71 - 600 100 - 600 300 - 600	
COLD ROLLED				
Cold rolled coils (2B/N4)	201,202,301,304,304L 316,316L,321,310S	0.3 - 0.49 0.5 - 6.00	600 - 1250 600 - 1500	
Cold rolled sheets (2B/N4)	201,202,301,304,304L 316,316L,321,310S	0.5 - 6.00	1219 1524	6096
Cold rolled slits (2B/2D)	201,202,301,304,304L 316,316L,321,310S	0.40 - 2.49 2.49 - 3.50 3.51 - 6.00	20 - 600 30 - 600 71 - 600	

FINISHES

ASTM	EN 10088-2	DEFINITION	AVAILABLE GRADES
HOT ROLLED FINISHES			
N1	1D	Annealed and pickled material	All
COLD ROLLED FINISHES			
2D	2D	Annealed and pickled material	All
2B	2B	Annealed, pickled and skin passed material	All
N4	2G	2B/2BB polished material with #180, #240, #400 grit belts	All

SpecifiedProperties

These properties are specified for flat rolled product (plate, sheet and coil) in ASTM A240/A240M. Similar but not necessarily identical properties are specified for other products such as pipe and bar in their respective specifications. Minor changes to 304 and 304L composition limits were made in 2006-7 to harmonise with similar grades specified in ISO and European standards.

CompositionSpecification(%)

Grade		C	Mn	Si	P	S	Cr	Mo	Ni	N
304	min.	-	-	-	-	-	17.5	-	8.0	-
	max.	0.07	2.0	0.75	0.045	0.030	19.5		10.5	0.10
304L	min.	-	-	-	-	-	17.5	-	8.0	-
	max.	0.030	2.0	0.75	0.045	0.030	19.5		12.0	0.10
304H	min.	0.04	-	-	-	-	18.0	-	8.0	-
	max.	0.10	2.0	0.75	0.045	0.030	20.0		10.5	

MechanicalPropertySpecification (single values are minima except as noted)

Grade	Tensile Strength (MPa) min	Yield Strength 0.2% Proof (MPa) min	Elongation (% in 50mm) min	Hardness	
				Rockwell B (HR B) max	Brinell (HB) max
304	515	205	40	92	201
304L	485	170	40	92	201
304H	515	205	40	92	201
304H also has a requirement for a grain size of ASTM No 7 or coarser.					

PhysicalProperties (typical values in the annealed condition)

Grade	Density (kg/m³)	Elastic Modulus (GPa)	Mean Coefficient of Thermal Expansion			Thermal Conductivity		Specific Heat	Electrical Resistivity
			0-100°C (µm/m/°C)	0-315°C (µm/m/°C)	0-538°C (µm/m/°C)	at 100°C (W/m.K)	at 500°C (W/m.K)	0-100°C (J/kg.K)	(nΩ.m)
304/L/H	7900	193	17.2	17.8	18.4	16.3	21.5	500	720

GradeSpecificationComparison

Grade	UNS No	Euronorm		Swedish SS	Japanese JIS
		No	Name		
304	S30400	1.4301	X5CrNi18-10	2332	SUS 304
304L	S30403	1.4307	X2CrNi18-9	2352	SUS 304L
304H	S30409	1.4948	X6CrNi18-11	-	-

These comparisons are approximate only. The list is intended as a comparison of functionally similar materials **not** as a schedule of contractual equivalents. If exact equivalents are needed original specifications must be consulted.

Limitation of Liability

The information contained in this datasheet is not an exhaustive statement of all relevant information. It is a general guide for customers to the products and services available from SMS and no representation is made or warranty given in relation to this document or the products or processes it describes. Actual Mill Test Certificate will be issued upon request.

SpecifiedProperties

These properties are specified for flat rolled product (plate, sheet and coil) in ASTM A240/A240M. Similar but not necessarily identical properties are specified for other products such as pipe and bar in their respective specifications.

CompositionSpecification(%)

Grade		C	Mn	Si	P	S	Cr	Mo	Ni	N
316	min.	-	-	-	-	-	16.0	2.00	10.0	-
	max.	0.08	2.0	0.75	0.045	0.030	18.0	3.00	14.0	0.10
316L	min.	-	-	-	-	-	16.0	2.00	10.0	-
	max.	0.030	2.0	0.75	0.045	0.030	18.0	3.00	14.0	0.10
316H	min.	0.04	-	-	-	-	16.0	2.00	10.0	-
	max.	0.10	2.0	0.75	0.045	0.030	18.0	3.00	14.0	

MechanicalPropertySpecification (single values are minima except as noted)

Grade	Tensile Strength (MPa) min	Yield Strength 0.2% Proof (MPa) min	Elongation (% in 50mm) min	Hardness	
				Rockwell B (HR B) max	Brinell (HB) max
316	515	205	40	95	217
316L	485	170	40	95	217
316H	515	205	40	95	217
316H also has a requirement for a grain size of ASTM No 7 or coarser.					

PhysicalProperties (typical values in the annealed condition)

Grade	Density (kg/m³)	Elastic Modulus (GPa)	Mean Coefficient of Thermal Expansion			Thermal Conductivity		Specific Heat	Electrical Resistivity
			0-100°C (µm/m/°C)	0-315°C (µm/m/°C)	0-538°C (µm/m/°C)	at 100°C (W/m.K)	at 500°C (W/m.K)	0-100°C (J/kg.K)	(nΩ.m)
316 & 316L/H	8000	193	15.9	16.2	17.5	16.3	21.5	500	740

GradeSpecificationComparison

Grade	UNS No	Euronorm		Swedish SS	Japanese JIS
		No	Name		
316	S31600	1.4401	X5CrNiMo17-12-2	2347	SUS 316
316L	S31603	1.4404	X2CrNiMo17-12-2	2348	SUS 316L
316H	S31609	-	-	-	-
These comparisons are approximate only. The list is intended as a comparison of functionally similar materials **not** as a schedule of contractual equivalents. If exact equivalents are needed original specifications must be consulted.					

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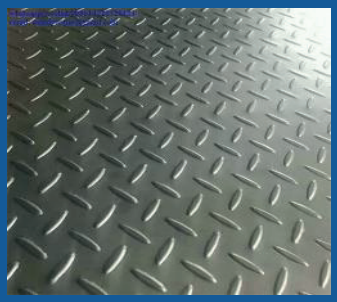
STAINLESS STEEL CHEQUER PLATE TO ASTM A240 (EMBOSSED / FLOOR PLATE)

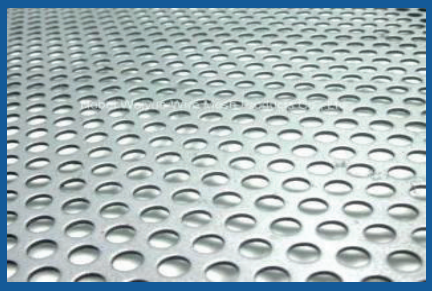
HOT-ROLLED ANNEALED & PICKLED



Size			GRADE / FINISH			
THICKNESS	WIDTH	LENGTH	304		316	
MM	Ft	Ft	2B	No.1	2B	No.1
1.2	4' 5'	8' 10'			AVAILABLE UPON REQUEST	
1.5	4' 5'	8' 10'				
2.0	4' 5'	8' 10'				
2.5	4' 5'	8' 10'				
3.0	4' 5'	8' 10'				
4.0	4' 5'	8' 10'				
5.0	4' 5'	8' 10'				
6.0	4' 5'	8' 10'				

STAINLESS STEEL PEFORATED SHEET TO ASTM A240

HOT-ROLLED ANNEALED & PICKLED



Size					GRADE / FINISH			
THICKNESS	WIDTH	LENGTH	HOLE SIZE	PITCH	304		316	
MM	Ft	Ft	MM	MM	2B	No.1	2B	No.1
1.2	4'	8'	1.5	3.0			AVAILABLE UPON REQUEST	
	4'	8'	2.0	4.0				
	4'	8'	3.0	5.0				
	4'	8'	4.0	6.0				
	4'	8'	6.0	9.0				
	4'	8'	8.0	12.0				
	4'	8'	10.0	15.0				
	4'	8'	12.0	15.0				
1.5	4'	8'	2.0	4.0				
	4'	8'	3.0	5.0				
	4'	8'	4.0	6.0				
	4'	8'	6.0	9.0				
2.0	4'	8'	2.0	4.0				
	4'	8'	3.0	5.0				
	4'	8'	4.0	6.0				
	4'	8'	6.0	9.0				
3.0	4'	8'	2.0	4.0				
	4'	8'	3.0	5.0				
	4'	8'	4.0	6.0				
	4'	8'	6.0	9.0				