

Sheets & Plates

Main Uses

JIS Designation	AISI Designation	Characteristics and Main Uses
SUS 410	410	The most common grade of economical 13 Cr steels. In the annealed condition, this grade may be drawn or formed. Used for machine structures, home appliances, etc.
SUS 403	403	Suited for steam turbine blades, jet engines, compressor blades and other applications involving high stresses.
SUS 405	405	Possesses corrosion resistance equivalent to that of 13 Cr steel. Used in applications involving welding. Machine structures, food-processing machinery, chemical equipment, etc.
SUS 420 J2	420	High carbon content results in high abrasion resistance. Greater hardness may be obtained by heat treatment. Used for cutlery, machine parts, etc.
SUS 434	434	Designed to resist atmospheric corrosion especially for use as automotive trim. Used for wheel covers, hub caps, grilles, mouldings, etc.
SUS 430	430	The most common and widely used of the ferritic grades. This steel may be drawn or formed and has high corrosion resistance. Used for office and kitchen equipment, buildings, automobiles, etc.
SUS 301	301	This grade can be cold worked to very high strength levels. Corrosion resistance is somewhat inferior to SUS 304. Used for rolling stock, automobiles, home appliances, etc.
SUS 302	302	More resistant to corrosion than SUS 301. Suited for oil, chemical, paper and food-processing machinery, dairy installations, buildings, kitchen equipment and utensils, etc.
SUS 304	304	Slightly more resistant to general corrosion than SUS 302. Suited for the same range of applications as SUS 302.
SUS 304L	304L	A special SUS 304 grade for use where carbide precipitation after welding is undesirable. Used for chemical and petrochemical equipment, nuclear reactor equipment, oil-refining equipment, etc.
SUS 321	321	Suited for use in a 500° to 850°C temperature range in which carbides tend to precipitate and in applications where stress relieving (or annealing) is not feasible. Used in the chemical industry, etc.
SUS 316	316	High resistant to such reducing acids as sulphuric, sulphurous, acetic and hydrochloric acids. Also, high creep strength at elevated temperatures. Used in applications in the paper, textile, and chemical industries.
SUS 316L	316L	A special SUS 316 grade intended for use where carbide precipitation after welding is undesirable.
SUS 347	347	Suited for the same applications as SUS 321. Widely used for the construction of manufacturing equipment involving welding.

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SPECIFICATIONS: CHEMICAL COMPOSITION OF STAINLESS STEEL SHEETS

Type of Structure	Type of Composition	Corresponding Designation			Chemical Composition, %								Other Elements
		JIS	AISI	DIN	C	Si max.	Mn	P max.	S max.	Ni	Cr	Mo	
Austenite	17Cr-5Ni-7Mn	SUS 201	201	--	0.15 max.	1.00	5.5 - 7.5	0.06	0.03	3.5 - 5.5	16.0 - 18.0	--	N: 0.25 max.
	18Cr-6Ni-10Mn	SUS 202	202	--	0.15 max.	1.00	7.5 - 10.0	0.06	0.03	4.0 - 5.5	16.0 - 18.0	--	N: 0.25 max.
	17Cr-7Ni	SUS 301	301	4310	0.15 max.	1.00	2.00	0.04	0.03	6.0 - 8.0	16.0 - 18.0	--	--
	18Cr-8Ni-high C	SUS 302	302	4300	0.15 max.	1.00	2.00	0.04	0.03	8.0 - 10.0	17.0 - 19.0	--	--
	18Cr-8Ni	SUS 304	304	4301	0.08 max.	1.00	2.00	0.04	0.03	8.0 - 10.5	18.0 - 20.0	--	--
	18Cr-8Ni-extra-low C	SUS 304L	304L	4306	0.03 max.	1.00	2.00	0.04	0.03	9.0 - 13.0	18.0 - 20.0	--	--
	18Cr-12Ni	SUS 305	305	3955	0.12 max.	1.00	2.00	0.04	0.03	10.5 - 13.0	17.0 - 19.0	--	--
	23Cr-12Ni	SUS 309S	309S	4845	0.03 max.	1.00	2.00	0.04	0.03	12.0 - 15.0	22.0 - 24.0	--	--
	25Cr-20Ni	SUS 310S	310S	--	0.08 max.	1.50	2.00	0.04	0.03	19.0 - 22.0	24.0 - 26.0	--	--
	18Cr-12Ni-2.5Mo	SUS 316	316	4401	0.08 max.	1.00	2.00	0.04	0.03	10.0 - 14.0	16.0 - 18.0	2.0 - 3.0	--
	18Cr-12Ni-7.5 Mo-extra-low C	SUS 316L	316L	4404	0.03 max.	1.00	2.00	0.04	0.03	12.0 - 15.0	16.0 - 18.0	2.0 - 3.0	--
	18Cr-12Ni-2Mo-2Cu	SUS 316J1	--	4505	0.03 max.	1.00	2.00	0.04	0.03	10.0 - 14.0	17.0 - 19.0	1.2 - 2.75	Cu: 1.0-2.5
	18Cr-13Ni-3.5Mo	SUS 317	317	4402	0.03 max.	1.00	2.00	0.04	0.03	18.0 - 15.0	19.0 - 20.0	3.0 - 4.0	--
	18Cr-13Ni-3.5 Mo-extra-low C	SUS 317L	317L	--	0.03 max.	1.00	2.00	0.04	0.03	11.0 - 15.0	18.0 - 20.0	3.0 - 4.0	--
	18Cr-8Ni-Ti	SUS 321	321	4541	0.03 max.	1.00	2.00	0.04	0.03	9.0 - 13.0	17.0 - 19.0	--	Ti: 5 x C% min
18Cr-9Ni-Nb	SUS 347	347	4550	0.03 max.	1.00	2.00	0.04	0.03	9.0 - 13.0	17.0 - 19.0	--	Nb+Ta: 10xC% min	
Ferrite	13Cr-Al	SUS 405	405	4002	0.03 max.	1.00	1.00	0.04	0.03	0.60 max.	11.5 - 16.0	--	Al: 0.1-0.3
	16Cr	SUS 429	429	4009	0.12 max.	1.00	1.00	0.04	0.03	--	14.0 - 16.0	--	--
	18Cr	SUS 430	430	4016	0.12 max.	0.75	1.00	0.04	0.03	0.60 max.	16.0 - 18.0	--	--
	18Cr-Mo	SUS 434	434	4113	0.12 max.	1.00	1.00	0.04	0.03	--	16.0 - 18.0	0.75 - 1.25	--
Martensite	13Cr-low Si	SUS 403	403	4024	0.15 max.	0.50	1.00	0.04	0.03	0.60 max.	11.5 - 13.0	--	--
	13Cr	SUS 410	410	4000	0.15 max.	1.00	1.00	0.04	0.03	0.60 max.	11.5 - 13.5	--	--
	13Cr-high C	SUS 420J2	420	4021	0.26-0.40	1.00	1.00	0.04	0.03	--	12.0 - 14.0	--	--
	18Cr-high C	SUS 440A	440A	--	0.6 - 0.75	1.00	1.00	0.04	0.03	--	16.0 - 18.0	0.75 max.	--
Precipitation Hardened	17Cr-7Ni-1Al	SUS 631	631	--	0.09 max.	1.00	1.00	0.04	0.03	6.5 - 7.75	16.0 - 18.0	--	Al: 0.75-1.5

Sheets & Plates

SPECIFICATIONS: MECHANICAL PROPERTIES OF STAINLESS STEEL SHEETS

Type of Structure	Type of Composition	Corresponding Designation			Mechanical Properties							
					Tensile Test			Hardness Test		Bend Test 180° Radius (t, min)		
		Tensile Strength min.	Yield Strength min.	Elongation %, min.	Rockwell B Scale max.	Vickers Hardness max.						
JIS	AISI	DIN	kg/mm ²	psi	kg/mm ²	psi	JIS No.13 Specimen					
Austenite	17Cr-5Ni-7Mn	SUS 201	201	--	65	93,000	25	35,800	40	100	253	--
	18Cr-6Ni-10Mn	SUS 202	202	--	60	85,500	25	35,800	40	95	218	--
	17Cr-7Ni	SUS 301	301	4310	53	75,800	21	30,000	40	90	200	--
	18Cr-8Ni-high C	SUS 302	302	4300	53	75,800	21	30,000	40	90	200	--
	18Cr-8Ni	SUS 304	304	4301	53	75,800	21	30,000	40	90	200	--
	18Cr-8Ni -extra-low C	SUS 304L	304L	4306	49	69,500	18	25,500	40	90	200	--
	18Cr-12Ni	SUS 305	305	3955	49	69,500	18	25,500	40	90	200	--
	23Cr-12Ni	SUS 309S	309S	4845	53	75,800	21	30,000	40	90	200	--
	25Cr-20Ni	SUS 310S	310S	--	53	75,800	21	30,000	40	90	200	--
	18Cr-12Ni-2.5Mo	SUS 316	316	4401	53	75,800	21	30,000	40	90	200	--
	18Cr-12Ni-7.5 Mo-extra-low C	SUS 316L	316L	4404	49	69,500	18	25,500	40	90	200	--
	18Cr-12Ni-2Mo -2Cu	SUS 316J1		4505	53	75,800	21	30,000	40	90	200	--
	18Cr-13Ni-3.5Mo	SUS 317	317	4402	53	75,800	21	30,000	40	90	200	--
	18Cr-13Ni-3.5 Mo-extra-low C	SUS 317L	317L	--	49	69,500	18	25,800	40	90	200	--
	18Cr-8Ni-Ti	SUS 321	321	4541	53	75,800	21	30,000	40	90	200	--
18Cr-9Ni-Nb	SUS 347	347	4550	53	75,800	21	30,000	40	90	200	--	
Ferrite	13Cr-Al	SUS 405	405	4002	42	60,000	18	25,500	20	88	200	t<8.05 t
	16Cr	SUS 429	429	4009	46	65,800	21	30,000	22	88	200	1.0 t
	18Cr	SUS 430	430	4016	46	65,800	21	30,000	22	88	200	1.0 t
	18Cr-Mo	SUS 434	434	4113	46	65,800	21	30,000	22	88	200	1.0 t
Martensite	13Cr-low Si	SUS 403	403	4024	45	64,000	21	30,000	20	88	200	1.0 t
	13Cr	SUS 410	410	4000	45	64,000	21	30,000	20	88	200	1.0 t
	13Cr-high C	SUS 420J2	420	4021	55	78,500	23	32,750	18	93	210	--
	18Cr-high C	SUS 440A	440A	--	60	85,500	25	35,800	15	97	230	--
Precipitation Hardened	17Cr-7Ni-1Al	SUS 631	631	--	105	148,000	39	55,500	20	92	200	--

FINISHES

Finish Designation	Finishing Method and Degree of Finish
No. 1	Hot-rolled, annealed and descaled. Generally used in industrial applications, where heat or corrosion resistance is required but surface smoothness is not particularly important.
No. 2D	Dull, smooth finish produced by cold rolling, annealing and pickling. Steel is soft and has a silver white surface, suited for deep drawing as well as general uses.
No. 2B	Bright, smooth cold-rolled finish obtained by skinpass rolling of No. 2D. Specified for general use.
No. 3	Intermediate polished finish obtained with rather coarse abrasives (#100 to #120 mesh). A higher luster can be attained by further polishing after fabrication.
No. 4	A standard polished finish produced with finer abrasives (#150 to #180 mesh). Widely specified for restaurant and kitchen equipment and dairy processing equipment.
#240	Polish finish of about #240. Used when finer finish than No. 4 finish is desired such as equipment for restaurants and household kitchens.
#320	Polishing finish of about #320.
#400	High luster finish produced by polishing No. 2B first with #400 buffing iron and then with buffing cloth. Suited for general use.
H.L.	Special polished finish having continuous lines produced with abrasives of an appropriate grain size. Mainly used in architectural applications.
BA	Highly reflective finish produced by cold rolling, bright annealing and temper rolling. Used where a lustrous surface is specially required.

Note:

Upon request, strip surface protection is provided such as bonding of vinyl sheets or vinyl coating.

Sheets & Plates

Sizes and Unit Weights

Size	1219 x 2438 (4' x 8')				1524 x 3048 (5' x 10')			
AISI	Type 304, 304L		Type 316, 316L		Type 304, 304L		Type 316, 316L	
Th / Wgt.	kg/pc	pcs/mt	kg/pc	pcs/mt	kg/pc	pcs/mt	kg/pc	pcs/mt
0.3	7.07	141.4	7.11	140.70	11.06	90.42	11.13	89.85
0.4	9.42	106.2	9.48	105.50	14.75	67.80	14.84	67.39
0.45	10.60	94.34	10.67	93.72	16.59	60.28	16.70	59.88
0.5	11.78	84.89	11.85	84.39	18.44	54.23	18.56	53.88
0.55	12.95	77.22	13.04	76.69	20.28	49.31	20.41	49.00
0.6	14.13	70.77	14.22	70.32	22.12	45.21	22.27	44.90
0.7	16.49	60.64	16.59	60.28	25.81	38.74	25.98	38.49
0.8	18.84	53.08	18.96	52.74	29.50	33.90	29.69	33.68
0.9	21.20	47.17	21.33	46.88	33.18	30.14	33.40	29.94
1	23.55	42.46	23.70	42.19	36.87	27.12	37.11	26.95
1.2	28.26	35.39	28.44	35.16	44.24	22.60	44.53	22.46
1.5	35.33	28.30	35.55	28.13	55.31	18.08	55.67	17.96
2	47.10	21.23	47.40	21.10	73.74	13.56	74.22	13.47
2.3	54.17	18.46	54.51	18.35	84.80	11.79	85.35	11.72
2.5	58.88	16.98	59.25	16.88	92.18	10.85	92.78	10.78
3	70.65	14.15	71.10	14.06	110.6	9.04	111.33	8.98
4	94.20	10.62	94.80	10.55	147.5	6.78	148.4	6.74
4.5	106.0	9.44	106.7	9.38	165.9	6.03	167.0	5.99
5	117.8	8.49	118.5	8.44	184.4	5.42	185.6	5.39
6	141.3	7.08	142.2	7.03	221.2	4.52	222.7	4.49
7.5	176.6	5.66	177.8	5.63	276.5	3.62	278.3	3.59
8	188.4	5.31	189.6	5.27	295.0	3.39	296.9	3.37
9	212.0	4.72	213.3	4.69	331.9	3.01	334.0	2.99
10	235.5	4.25	237.0	4.22	368.7	2.71	371.1	2.69
12	282.6	3.54	284.4	3.52	442.4	2.26	445.3	2.25
15	353.3	2.83	355.5	2.81	553.1	1.81	556.7	1.80
18	423.9	2.36	426.6	2.34	663.7	1.51	668.0	1.50
20	471.0	2.12	474.0	2.11	737.4	1.36	742.2	1.35
22	518.1	1.93	521.4	1.92	811.2	1.23	816.4	1.22
25	588.8	1.70	592.5	1.69	921.8	1.08	927.8	1.08
30	706.5	1.42	711.0	1.41	1,106.0	0.90	1,113.0	0.90
32	753.6	1.33	758.4	1.32	1,180.0	0.85	1,188.0	0.84
38	894.9	1.12	900.6	1.11	1,401.0	0.71	1,410.0	0.71
40	942.0	1.06	948.0	1.05	1,475.0	0.68	1,484.0	0.67
44	1,036.0	0.97	1,043.0	0.96	1,622.0	0.62	1,633.0	0.61
50	1,178.0	0.85	1,185.0	0.84	1,844.0	0.54	1,856.0	0.54
65	1,531.0	0.65	1,541.0	0.65	2,397.0	0.42	2,412.0	0.41
75	1,766.0	0.57	1,778.0	0.56	2,765.0	0.36	2,783.0	0.36