



E STEEL SDN BHD (891338-A)

NO 3, Lorong Sungai Puloh 7/KU 6,
Kawasan Perindustrian Sungai Puloh, 42100 Selangor D.E
Tel : 03-3292 8686 / 32928666 / 32928777
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301 Stainless Steel Technical Data Sheet

Alloy	UNS Number	SAE Number
SUS 301	S30100	30301

GENERAL PROPERTIES

SUS 301 is an austenitic stainless steel with a nominal composition of 17 percent chromium and 7 percent nickel. The high strengths of this grade of steel in the six available conditions or tempers, its resistance to atmosphere corrosion and its bright, attractive surface make it an excellent choice for decorative structural applications. Automobile molding and trim, wheel covers, conveyor belts, kitchen equipment, roof drainage systems, hose clamps, springs, truck and trailer bodies, railway and subway cars are some of the major applications for this versatile grade. By varying the chemical composition within the limits set by the ASTM specifications and by temper rolling, a broad range of magnetic and mechanical properties can be obtained for a variety of applications.

RESISTANCE TO CORROSION

SS301 is resistant to a variety of corrosive media. However, the corrosion properties are not as good as the 18-8 chromium-nickel steels. Its susceptibility to carbide precipitation during welding restricts its use in many applications in favor of SUS 304 or SUS 304L.

PHYSICAL PROPERTIES

Melting Point	Density	Specific Gravity	Modulus of Elasticity in Tension
2550-2590° F 1399-1421° C	.29 lb/in ³ 8.03g/cm ³	8.03	28 X 10 ⁶ psi 193 Gpa



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CHEMICAL PROPERTIES

Alloy	C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N	Other
301	.15	2.00	.045	.030	.75	16.00-18.00	6.00-8.00	.75	.75	.10	-

All values are maximum values unless otherwise specified. Values are derived from applicable AMS and ASTM specifications.

MECHANICAL PROPERTIES

Grade	Code	As Rolled				After Low-temperature Annealing				Bendability
		Hardness HV	Tensile strength N/mm ²	Elongation %	Spring deflection limit N/mm ²	Hardness HV	Tensile strength N/mm ²	Elongation %	Spring deflection limit N/mm ²	
SUS301	SEH	≥ 530	≥ 1810	-	(≥ 650)	≥ 550	≥ 1940	-	(≥ 880)	-
	EH	≥ 490	≥ 1570	-	(≥ 590)	≥ 505	≥ 1665	-	(≥ 785)	-
	H	≥ 430	≥ 1320	-	(≥ 490)	≥ 440	≥ 1400	-	(≥ 655)	*4t R90° bending available
	3/4H	≥ 370	≥ 1130	≥ 5	(≥ 390)	≥ 380	≥ 1175	≥ 4	(≥ 540)	2.5t R90° bending available
	1/2H	≥ 310	≥ 930	≥ 10	(≥ 315)	≥ 315	≥ 960	≥ 8	(≥ 390)	2t R90° bending available
	1/4H	≥ 250	≥ 860	≥ 25	-	≥ 253	≥ 880	≥ 20	-	1t R90° bending available



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Specified Thickness (inch)	Thickness Tolerances - Inch For the thickness and widths given.		
	Width (inch)		
	3/16 to 6 Incl.	Over 6 to 12 Incl.	Over 12 to 24 Excl.
.005 to .010 Incl.	10%	10%	10%
Over .010 to .011 Incl.	.0015	.0015	.0015
Over .011 to .013 Incl.	.0015	.0015	.002
Over .013 to .017 Incl.	.0015	.002	.002
Over .017 to .020 Incl.	.0015	.002	.0025
Over .020 to .029 Incl.	.002	.0025	.0025
Over .029 to .035 Incl.	.002	.003	.003
Over .035 to .050 Incl.	.0025	.0035	.0035
Over .050 to .069 Incl.	.003	.0035	.0035
Over .069 to .100 Incl.	.003	.004	.005
Over .100 to .125 Incl.	.004	.0045	.005
Over .125 to .161 Incl.	.0045	.0045	.005
Over .161 to 3/16 Excl.	.005	.005	.006

Note 1: Thickness measurements are taken at least 3/8 inch in from edge of the strip, except that on widths less than 1 inch the tolerances are applicable for measurements at all locations.

Note 2: Above tolerances include crown.