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Date 8/05/2022

This technical specification aims to define the chemical/mechanical properties and standards for cold rolled grade 301 stainless steel strips.

Grade 301 Stainless Steel Strips Technical Specifications

1. 301 Stainless Steel Strips Chemical Composition

	Grade	Spec.	Range	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Mo	%Ti	%N
301	A STM A 240	Min.						16.00	6.00	-	-	-	
	301	301 ASTM A240	Max.	0.15	1.00	2.00	0.045	0.030	18.00	8.00	-	-	0.10

Stainless Steel Grade Comparison

STS	USA	UNS	CHINA	EURONORM		RUSSIA	SWEDISH	JAPANESE
GRADE	AISI/ASTM	NO	GB	NO	NAME	GOST	SS	JIS
301	301	S30100	12Cr17Ni7	1.4310	X12CrNi177	-	2331	SUS 301



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2. 301 Stainless Steel Strips Mechanical Properties

Grade	EN Grade	Yield Strength EN	Yield Strength Rp0.2 (N/mm²)	Tensile Strength EN	Tensile Strength Rm (N/mm²)	Hardness (HV)	Elongation A80 % Min.
		CP350	350-500	C700	700-850	219-265	35
	1.4310	CP500	500-700	C850	850-1000	265-311	25
		CP700	700-900	C1000	1000-1150	311-358	20
301		CP900	900-1100	C1150	1150-1300	358-403	15
301		CP1100	1100-1300	C1300	1300-1500	403-464	10
		CP1300	1300-1500	C1500	1500-1700	464-520	5
		CP1500	1500-1700	C1700	1700-1900	520-575	2
		CP1700	1700-1900	C1900	1900-2200	575-655	1



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3. 301 Stainless Steel Strips Shipping Mark

• Below information must be mentioned on each 301 stainless steel strips marking (shipping mark)

Supplier:	Customer:	
Alloy/Steel Grade:	Edge:	
Surface Finish:	Package No.:	
Materials Heat No.:	Net Weight:	
Size:	Gross Weight:	
Coil Quantity:	Date:	



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4. 301 Stainless Steel Strips Standard Packaging

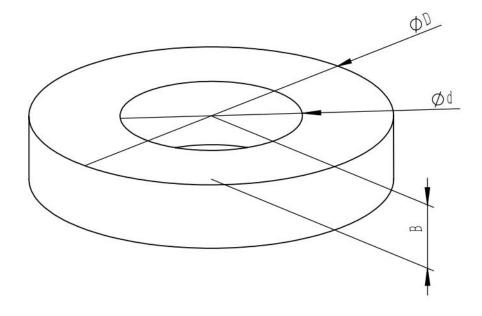
- 1) Cardboard/inner core inner diameter: 300/400/500mm.
- 2) Each coil net weights to be within 500 kg. Max grosss weight of each wooden pallet 1200 Kg.
- 3) Overall diameter of each coil should not exceed 1100mm.
- 4) All coils to have no splices or joints.
- 5) Material to be consistent throughout each coil, especially width, thickness and formability.
- 6) Wooden pallet with coils packed eye to sky with 40mm spacers between coils and an identification label with information relating to material.
- 7) To be supplied on pallets with a minimum leg height of 100mm.
- 8) Coils must be stored and transported in a dry environment to minimise condensation.



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COIL B (Midth)	OE		ID		
COIL B (Width)	ØD MAX	ØD MIN	Ød		
000-500mm	1100mm	600mm	300mm/400mm/500mm		





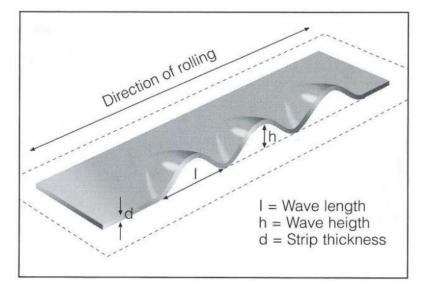
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5. 301 Stainless Steel Strips Flatness Tolerance

301 stainless steel strips flatness and edge waviness tolerances must be as customer's requested.

Thickness	HZW S	tandard	EN		
			1.4310		
	h/I	h/l in %	h/I	h/l in %	
≤1mm	≤0.015	≤1.5	≤0.03	≤3.0	
>1mm	≤0.015	≤1.5	≤0.02	≤2.0	





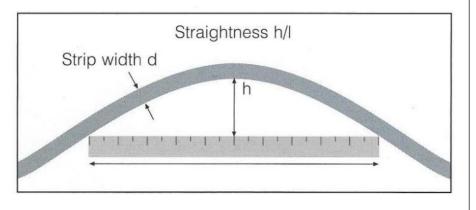
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6. 301 Stainless Steel Strips Straightness Tolerance

301 stainless steel strips straightness tolerance tolerances must be as customer's requested.

Width/mm		EN 1.4310 standard Straightness tolerance in mm						
		Noi	rmal	HZW Standard				
≥	<	Measure	ed length	Measured length				
		1000mm	2000mm	1000mm	2000mm			
3	10	≤ 5	≤ 20	≤ 2.5	≤ 10			
10	25	≤ 4	≤ 16	≤ 1.5	≤ 6			
25	40	≤ 3	≤ 12	≤ 1.25	≤ 5			
40	125	≤2	≤ 8	≤ 1.0	≤ 4			
125	400	≤ 1.5	≤ 6	≤ 0.75	≤ 3			





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7. 301 Stainless Steel Strips Thickness Tolerance

Width	JIS4305 (ET)				ASTM A240			GB/T 4239				
Thickness	<160	≥160	≥250	≥400	>5	>25	>76	>150	>20	>150	>250	>400
		250	< 400	< 600	≤25	≤76	≤150	≤300	≤150	≤250	≤400	≤600
<0.10	±0.01	±0.020	-	-	±10%	±10%	0.1	±10%	±0.010	±0.010	0.01	-
≥0.10-0.16	±0.015	±0.020	-	-	±10%	±10%	0.1	±10%	±0.010	±0.010	0.01	-
≥0.16-0.25	±0.020	±0.025	±0.030	±0.030	±0.04	±0.04	0.04	±0.40	±0.010	±0.010	0.01	-
≥0.25-0.40	±0.025	±0.030	±0.035	±0.035	±0.05	±0.05	0.05	±0.06	±0.020	±0.020	±0.020	±0.020
≥0.40-0.60	±0.035	±0.040	±0.040	±0.040	±0.06	±0.06	0.06	±0.06	±0.020	0.02	±0.020	±0.030
≥0.60-0.80	±0.040td	±0.045	±0.045	±0.045	±0.06	±0.06	±0.06	±0.09	0.03	0.03	±0.030	±0.040



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8. 301 Stainless Steel Strips Width Tolerance

301 Stainless Steel Strips Width Tolerance Range

Thickness	JIS4305 (EW)		ASTI	M A240	GB/T 4239			
Width	< 0.60	≥0.60-1.00	< 0.38	≥0.38-1.00	< 0.50	≥0.50-1.00		
< 10	-	-	-	-	-	-		
≥10-80	±0.15	±0.20	±0.127	±0.127	±0.15	±0.20		
≥80-160	±0.15	±0.20	±0.127	±0.127	±0.20	±0.010		
≥160-280	±0.20	±0.25	±0.254	±0.254	±0.20	±0.25		
≥260-400	±0.25	±0.25	±0.254	±0.254	±0.25	±0.30		
≥400-600	±0.30	±0.30	±0.406	±0.406	±0.30	±0.30		