

STAINLESS STEEL – Austenitic Grade_General Fabrication

DEK Reference ID:									
DSM 1.2.8									
Material Name EN:									
1.4301									
Steel Group:									
Alloy special steels: Stainless steels with >= 2,5 % Ni, without Mo, Nb and Ti									
Characteristics:									
Machinable, especially tough at low temperature, suitable for cold forming, resistant to corrosion, non-magnetizable, suitable for polishing, weldable, drawable, elevated temperature resistant, crevice corrosion resistant, suitable for cold upsetting, resistance to intergranular corrosion in the delivery condition, suitable for cold extrusion, austenitic, corrosion resistance to rural atmosphere, corrosions resistance to urban atmosphere.									
Chemical Composition (subset C, Si, Mn, Cr, Ni):									
C (%) - Min	C (%) - Max	Si (%) - Min	Si(%) - Max	Mn (%) - Min	Mn(%) - Max	Cr (%) - Min	Cr (%) - Max	Ni (%) - Min	Ni(%) - Max
0	0.07	0	1	0	2	17.5	19.5	8	10.5
Properties:									
Density (g/cm3)	Young's modulus (GPA)	Yield Stress YS Min MPa	Yield Stress YS Max MPa	Tensile Strength TS Min MPa	Tensile Strength TS Max MPa	Elongation A (%)			
7.92	194	230	-	540	750	45			
Material Safety Data Sheet:									
 Material Safety Data Sheet For 1.4301									
Approved Standards:									
Material Number	Country	Steel Name	Product			Standard's Name		Edition	
1.4301	EU	X5CrNi18-10	flat product			DIN EN 10028-7		2016	
1.4301	EU	X5CrNi18-10	stainless steel, list			DIN EN 10088-1		2014	
1.4301	EU	X5CrNi18-10	strip and sheet / plate			DIN EN 10088-2		2014	
1.4301	EU	X5CrNi18-10	bar, rod, section, general			DIN EN 10088-3		2014	
1.4301	EU	X5CrNi18-10	sheet/plate and strip for constr. purposes			DIN EN 10088-4		2010	
1.4301	EU	X5CrNi18-10	bar, rod, section for constr. purposes			DIN EN 10088-5		2009	
1.4301	EU	X5CrNi18-10	tube, seamless			DIN EN 10216-5		2014	
1.4301	EU	X5CrNi18-10	tube, welded			DIN EN 10217-7		2015	
1.4301	EU	X5CrNi18-10	rod, bar and wire			DIN EN 10263-5		2018	
1.4301	EU	X5CrNi18-10	bar			DIN EN 10272		2016	
1.4301	EU	X5CrNi18-10	hollow bar for machining, stainless			DIN EN 10294-2		2012	
1.4301	EU	X5CrNi18-10	tube, welded			DIN EN 10296-2		2006	
1.4301	EU	X5CrNi18-10	tube, seamless			DIN EN 10297-2		2006	

Issue	01	02	03	04	05	06	07	08	09
Date	44682	44761	N/A	24/06/21					

Approved Standards:					
Material Number	Country	Steel Name	Product	Standard's Name	Edition
1.4301	EU	X5CrNi18-10	tube, welded	DIN EN 10312	2005
1.4301	ISO	X5CrNi18-10	bright product	ISO 683-18	2014
1.4301	ISO	X5CrNi18 9E	cold heading steel	ISO 4954	2018
1.4301	ISO	X5CrNi18-10	flat product	ISO 9328-7	2018
1.4301	ISO	X5CrNi18-9	tube, seamless	ISO 9329-4	1997
1.4301	ISO	X5CrNi18-9	tube, welded	ISO 9330-6	1997
1.4301	ISO	X5CrNi18-10	steel, stainless	ISO 15510	2014
1.4301	ISO	X5CrNi18-10	flat product, stainless	ISO 16143-1	2014
1.4301	ISO	X5CrNi18-10	semi-finished product, bar, rod, section	ISO 16143-2	2014
1.4301	CN	0Cr18Ni9	strip, hot rolled, stainless	YB/T 085	2007
1.4301	CN	0Cr19Ni9	strip, hot rolled, stainless	YB/T 110	2011
1.4301	CN	06Cr19Ni10	bar, stainless	GB/T 1220	2007
1.4301	CN	06Cr19Ni10	bar, heat resistant, stainless	GB/T 1221	2007
1.4301	CN	06Cr19Ni10	tube, seamless, thin wall thickness	GB/T 3089	2020
1.4301	CN	0Cr18Ni9	tube, stainless, small diameter	GB/T 3090	2020
1.4301	CN	06Cr19Ni10	sheet and strip, cold rolled, stainless	GB/T 3280	2015
1.4301	CN	06Cr19Ni10	bar, cold finished	GB/T 4226	2009
1.4301	CN	0Cr19Ni9	strip, cold rolled, stainless	YB/T 5310	2010
1.4301	CN	06Cr19Ni10	sheet and strip, hot rolled, stainless	GB/T 4237	2015
1.4301	CN	0Cr18Ni9	sheet and strip, cold rolled, stainless	GB/T 3280	2015
1.4301	CN	0Cr18Ni9	tube, welded, stainless	GB/T 12770	2012
1.4301	CN	0Cr18Ni9	tube, welded, stainless	GB/T 12771	2019
1.4301	CN	0Cr18Ni9	tube, tube for boiler, seamless	GB/T 13296	2013
1.4301	CN	1Cr19Ni9	tube, tube for boiler, seamless	GB/T 13296	2013
1.4301	CN	0Cr18Ni9	tube, seamless, stainless	GB/T 14975	2012
1.4301	CN	0Cr18Ni9	tube, seamless, stainless	GB/T 14976	2012
1.4301	CN	0Cr18Ni9	pipe, welded, stainless	YB/T 5363	2016
1.4301	CN	06Cr19Ni10	steel, stainless and heat resisting	GB/T 20878	2007
1.4301	CN	06Cr19Ni9	strip for pipes, cold rolled, stainless	GB/T 21074	2007
1.4301	CN	06Cr19Ni10	plate and strip, stainless	GB/T 24511	2017
1.4301	JP	SUS304TKA	pipe for machine and structural purpose	JIS G 3446	2017
1.4301	JP	SUS304TKC	pipe for machine and structural purpose	JIS G 3446	2017
1.4301	JP	SUS304TBS	pipe, sanitary pipe, stainless	JIS G 3447	2015
1.4301	JP	SUS304TP	tube, stainless, for ordinary piping	JIS G 3459	2016
1.4301	JP	SUS304TB	tube, tube for boiler, stainless	JIS G 3463	2019
1.4301	JP	SUS304TPY	pipe, welded, large diameter, stainless	JIS G 3468	2016
1.4301	JP	SUS304	bar, stainless	JIS G 4303	2017
1.4301	JP	SUS304	sheet / plate and strip, hot rolled, stainless	JIS G 4304	2012

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Material Number	Country	Steel Name	Product	Standard's Name	Edition
1.4301	JP	SUS304	sheet/plate and strip, cold rolled, stainless	JIS G 4305	2012
1.4301	JP	SUS304	sections, hot formed	JIS G 4317	2018
1.4301	JP	SUS304	bar, stainless	JIS G 4318	2020
1.4301	JP	SUS304FB	bloom and billet for forging, stainless	JIS G 4319	2017
1.4301	JP	SUS304A	steel for building structure, stainless	JIS G 4321	2015
1.4301	JP	SUS 304-SD	bar for concrete reinforcement	JIS G 4322	2017
1.4301	US	Grade TP304	tube, seamless	ASTM A213/ M	2019
1.4301	US	Type 304	plate / sheet and strip, stainless	ASTM A240/ M	2020
1.4301	US	Grade TP304	tube, welded, austenitic steel	ASTM A249/ M	2018
1.4301	US	Grade TP304	tubing, seamless and welded	ASTM A269/ M	2015
1.4301	US	Grade TP304	tube, seamless and welded for sanitary	ASTM A270/ M	2015
1.4301	US	Type 304	bar and shape, stainless	ASTM A276/ M	2017
1.4301	US	Grade TP304	pipe, seamless and welded	ASTM A312/ M	2019
1.4301	US	Type 304	pipe, electric fusion welded	ASTM A358/ M	2019
1.4301	US	Grade TP304	pipe, seamless for high temperature	ASTM A376/ M	2019
1.4301	US	Grade CR304	fitting of wrought steel, stainless	ASTM A403/ M	2020
1.4301	US	Grade WP304	fitting of wrought steel, stainless	ASTM A403/ M	2020
1.4301	US	Grade TP304	pipe, large diameter, welded	ASTM A409/ M	2019
1.4301	US	Type 304	bar and shape, stainless	ASTM A479/ M	2020
1.4301	US	Grade MT304	tube, seamless, stainless	ASTM A511/ M	2020
1.4301	US	Grade MT-304	tube, welded, stainless	ASTM A554	2016
1.4301	US	Grade TP304	tube, seamless a. welded, small diameter	ASTM A632	2019
1.4301	US	Type 304	plate / sheet, strip, flat bar, stainless	ASTM A666	2015
1.4301	US	Grade TP304	tube, seamless and welded, feedwater heater	ASTM A688/ M	2018
1.4301	US	Type 304	plate, floor plate, stainless	ASTM A793	2014
1.4301	US	Grade TP304	pipe, single or double-welded	ASTM A813/ M	2019
1.4301	US	Grade TP304	pipe, welded	ASTM A814/ M	2019
1.4301	US	-	needle tubing steel, stainless	ASTM A908	2003
1.4301	US	Grade TP304	pipe, seamless, stainless	ASTM A943/ M	2019
1.4301	US	Type 304	bar for concrete reinforcement	ASTM A955/ M	2020
1.4301	US	Type 304	chromium steel, austenitic	ASTM A959	2019
1.4301	US	UNS: S30400	flange, fitting, valve, stainless	ASTM A988/ M	2017
1.4301	US	Type 304	steel, stainless, austenitic	ASTM F 899	2020
1.4301	US	AISI 304	wrought steel, stainless	SAE J 405	2018

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