

# X2CrNi19-11

Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel X2CrNi19-11 steel chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, We can produce round bars, forged rings, forged cakes, flat bars, tubes, sheets, plates, steel wires, steel strips, steel coils, etc. The size can be customized, the maximum order quantity is 100Kg. It also contains the use of X2CrNi19-11, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

#### **Data Table for Grades Stainless Steels - Special Steels Seamless** circular steel tubes for mechanical and general engineering purposes -Technical delivery conditions - Part 2: Stainless steel X2CrNi19-11

X2CrNi19-11 Standard Number			
ITEM	Standard Number	Descriptions	
1	NF EN 10028-7	Flat products made of steels for pressure purposes - Part 7: Stainless steels	
2	NF EN 10088-1	Stainless steels - Part 1: List of stainless steels	
3	NF EN 10088-2	Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes	
4	NF EN 10088-3	Stainless steels - Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes	
5	NF EN 10088-4	Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes	
6	NF EN 10088-5	Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes	
7	NF EN 10216-5 (2004)	Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel tubes	
8	NF EN 10217-7	Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel tubes	
9	NF EN 10250-4	Open die steel forgings for general engineering purposes - Part 4:	



		Stainless steels
10	NF EN 10253-3	Butt-welding pipe fittings - Part 3: Wrought austenitic and austenitic-ferritic (duplex) stainless steels without specific inspection requirements
11	NF EN 10253-4	Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements
12	NF EN 10263-5	Steel rod, bars and steel wire for cold heading and cold extrusion - Part 5: Technical delivery conditions for stainless steels
13	NF EN 10272	Stainless steel bars for pressure purposes
14	NF EN 10296-2 (2005)	Welded circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel
15	NF EN 10297-2 (2005)	Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

X2CrNi19-11 Chemical composition(mass fraction)(wt.%)				
Chemical	Min.(%)	Max.(%)		
С		0.030		
Si		1.00		
Mn		2.00		
Р		0.045		
S		0.015		
Cr	18.00	20.00		
Мо				
Ni	10.00	12.00		
Ν		0.11		

X2CrNi19-11 Physical Properties				
Tensile strength	115-234	?b/MPa		
Yield Strength	23	? 0.2 ?/MPa		
Elongation	65	?5? (%)		
?	-	?? (%)		
Akv	-	Akv?/J		
HBS	123-321			



HRC	30	-			
X2CrNi19-11 Mechanical Properties					
Tensile strength	231-231	?b/MPa			
Yield Strength	154	? 0.2 ?/MPa			
Elongation	56	?5?(%)			
?		??(%)			
Akv		Akv?/J			
HBS	235-268				
HRC	30				

X2CrNi19-11 Heat Treatment Regime				
Annealing	Quenching	Tempering	Normalizing	Q & T
?	?	?	?	?

X2CrNi19-11 Range of products				
Product type	Products	Dimension	Processes	Deliver Status
Plates / Sheets	Plates / Sheets	0.08-200mm(T)*W*L	Forging, hot rolling and cold rolling	Annealed, Solution and Aging, Q+T, ACID- WASHED, Shot Blasting
Steel Bar	Round Bar, Flat Bar, Square Bar	?8-1200mm*L	Forging, hot rolling and cold rolling, Cast	Black, Rough Turning, Shot Blasting,
Coil / Strip	Steel Coil /Steel Strip	0.03-16.0x1200mm	Cold-Rolled & Hot- Rolled	Annealed, Solution and Aging, Q+T, ACID- WASHED, Shot Blasting
Pipes / Tubes	Seamless Pipes/Tubes, Welded Pipes/Tubes	OD:6-219mm x WT:0.5-20.0mm	Hot extrusion, Cold Drawn, Welded	Annealed, Solution and Aging, Q+T, ACID- WASHED

### We can produce Stainless Steels - Special Steels the



#### specifications follows:

Note: (1) listed in the table apex diameter (d), to steel thickness (a) multiples said. (2) in the ASTM A6 standard specified scope can meet any additional conditions. (3) from the standard for 50 mm (2 in). Mechanical properties Mechanische Eigenschaften Caracteristiques mecaniques ReH Minimum yield strength / Mindestwert der oberen Streckgrenze / Limite d'elasticite minimale Rm Tensile strength / Zugfestigkeit / Resistance a la traction A Minimum elongation / Mindestwert der Bruchdehnung / Allongement minimal J Notch impact test / Kerbschlagbiegeversuch / Essai de flexion par choc Round bar: Diameter: 1mm-2000mm Square bar: Size: 50mm \* 50mm-600mm \*600mm Plate steel/flat bar: Size: Thickness: 0.1mm-800mm Width: 10mm to 1500mm Tube/pipe: Size: OD: 6-219mm WT: 1-35 mm. Cold-rolled sheet: Thickness: 2-5mm Width:1000mm Length: 2000mm Hot-rolled sheet: Thickness:6-80mm Width: 210-610mm Length: We can supply any length based on the customer's requirement. Forging/hot rolling/ extrusion of steel. Forging: Shafts with flanks/pipes/tubes/slugs/donuts/cubes/other shapes Finished goods condition: hot forging/hot rolling + annealing/normalizing + tempering/quenching + tempering/any conditions based on the customer's requirement Surface conditions: scaled (hot working finish)/ground/rough machining/fine machining/based on the customer's requirement Furnaces for metallurgical processing: electrode arc + LF/VD/VOD/ESR/Vacuum consumable electrode. Ultrasonic inspection: 100% ultrasonic inspection for any inperfections or based on the customer's requirement. UTS according to SEP 1921 C/c,D/d,E/e;A388 or GB/T 6402 Excellent service for all kinds of industries, with advantages of technologies, equipment and price. We serve you with our honesty, integrity, and professionality.