

This page is mainly introduced the 310 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 310, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 310

310 Standard Number:		
ITEM	Standard Number	Descriptions
1	A 167 (2009)	Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
2	A 182/A 182M (2012)	Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service
3	A 276 (2010)	Stainless Steel Bars and Shapes
4	A 314 (2008)	Stainless Steel Billets and Bars for Forging
5	A 409/A 409M (2008)	Welded Large Diameter Austenitic Steel Pipe for Corrosive or High-Temperature Service
6	A 473 (2009)	Stainless Steel Forgings
7	A 580/A 580M (2012)	Stainless Steel Wire
8	A 632 (2009)	Seamless and Welded Austenitic Stainless Steel Tubing (Small-Diameter) for General Service
9	A 959 (2011)	Standard Guide for Specifying Harmonized Standard Grade Compositions for Wrought Stainless Steels
10	A 965/A 965M (2012)	Steel Forgings, Austenitic, for Pressure and High Temperature Parts
11	SAE AMS-QQ-S-763B (1998)	Steel, Corrosion Resistant, Bars, Wire, Shapes, and Forgings
12	SAE J 467 (1968)	Special Purpose Alloys

310 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.25
Si		1.50
Mn		2.00
P		0.045
S		0.03
Cr	24.00	26.00
Ni	19.00	22.00
Mo		1.00

Cu								1.00	
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

310 Physical Properties

Tensile strength	115-234	σ_b /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta 5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	Akv $\geq$ /J
HBS	123-321	-
HRC	30	-

310 Mechanical Properties

Tensile strength	231-231	σ_b /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta 5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	Akv $\geq$ /J
HBS	235-268	-
HRC	30	-

310 Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

310 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	Φ8-1200mm*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 Specialsteel the specifications follows: