

This page is mainly introduced the SA-312 Grade TP 304L chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SA-312 Grade TP 304L, 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 SA-312 Grade TP 304L

SA-312 Grade TP 304L Standard Number:

ITEM	Standard Number	Descriptions
1	SA-312/SA-312M	Specification for Seamless and Welded Austenitic Stainless Steel Pipes

SA-312 Grade TP 304L Chemical composition (mass fraction) (wt.%)

Chemical	Min. (%)	Max. (%)
C		0.030
Si		1.00
Mn		2.00
P		0.045
S		0.03
Cr	18.00	20.00
Ni	8.00	13.00

SA-312 Grade TP 304L 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	-

SA-312 Grade TP 304L 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	-

SA-312 Grade TP 304L Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
✓	✓	✓	✓	✓

SA-312 Grade TP 304L 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	$\Phi 8$ -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 the specifications follows: