This page is mainly introduced the 1.4541 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.4541,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Datasheet for Steel Grades Specialsteel 1.4541

1.4541 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 10222-5	Steel forgings for pressure purposes - Part 5: Martensitic, austenitic and austenitic-ferritic stainless steels
10	NF EN 10250-4	Open die steel forgings for general engineering purposes - Part 4: Stainless steels
11	NF EN 10253-3	Butt-welding pipe fittings - Part 3: Wrought austenitic and austenitic-ferritic (duplex) stainless steels without specific inspection requirements
12	NF EN 10253-4	Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements
13	NF EN 10263-5	Steel rod, bars and steel wire for cold heading and cold extrusion - Part 5: Technical delivery conditions for stainless steels
14	NF EN 10272	Stainless steel bars for pressure purposes
15	NF EN 10296-2 (2005)	Welded circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel
16	NF EN 10297-2 (2005)	Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

1.4541 Chemical composition(mass fraction)(wt.%)

Chemical	Min.(%)	Max.(%)
C		0.080
Si		1.00
Mn		2.00
P		0.045
S		0.015
Cr	17.00	19.00
Mo		
Ni	9.00	12.00
Ti	5×C	0.70

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

Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

1.4541 Physical Properties

Tensile strength	115-234	σb/MPa
Yield Strength	23	σ 0.2 ≥/MPa
Elongation	65	δ5≥ (%)
ψ	-	ψ≥ (%)
Akv	-	Akv≥/J
HBS	123-321	-

HRC	30	-

1.4541 Mechanical Properties

Tensile strength	231-231	σb/MPa
Yield Strength	154	σ 0.2 ≥/MPa
Elongation	56	δ5≥(%)
ψ	-	ψ≥(%)
Akv	-	Akv≥/J
HBS	235-268	-
HRC	30	-

1.4541 Heat Treatment Regime

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

1.4541 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: