

This page is mainly introduced the 1.4418 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1.4418, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 1.4418

1.4418 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 10250-4	Open die steel forgings for general engineering purposes - Part 4: Stainless steels
8	NF EN 10272	Stainless steel bars for pressure purposes
9	NF EN 4629	Aerospace series - Steel FE-PM 3504 (X4CrNiMo16-5-1) - Air melted - Hardened and tempered - Forging stock - De = 300 mm
10	NF EN 4631	Aerospace series - Steel FE-PM 3504 (X4CrNiMo16-5-1) - Air melted - Hardened and tempered - Bar - De = 200 mm - 900 MPa = Rm = 1 050 MPa

1.4418 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.06
Si		0.70
Mn		1.50
P		0.040
S		0.015
Cr	15.00	17.00
Mo	0.80	1.50
Ni	4.00	6.00

N				0.020					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Aerospace series - Steel FE-PM 3504 (X4CrNiMo16-5-1) - Air melted - Hardened and tempered -

Bar - De = 200 mm - 900 MPa = Rm = 1 050 MPa

1.4418 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	-

1.4418 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	-

1.4418 Heat Treatment Regime				
Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

1.4418 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: