

This page is mainly introduced the Carpenter 20Cb 3 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Carpenter 20Cb 3, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades High Alloy Carpenter 20Cb 3

Carpenter 20Cb 3 Standard Number:

ITEM	Standard Number	Descriptions
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Carpenter 20Cb 3 Chemical composition (mass fraction) (wt.%)

Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

C	Si	Mn	P	S	Cr	Ni
0.07	1.0	2.0			19.0-21.0	32-38
Mo	Al	Cu	Nb	Ti	V	Ce
2-3		3-4	8*C~1.0			
N	Co	Pb	B	Other		
				Fe...		

Carpenter 20Cb 3 Physical Properties

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

Carpenter 20Cb 3 Mechanical Properties

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

Carpenter 20Cb 3 Heat Treatment Regime

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

Carpenter 20Cb 3 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 High Alloy the specifications follows: