

This page is mainly introduced the 4XXXXC Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 4XXXXC, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Tool Steel And Hard Alloy 4XMHΦC

4XXXXC Standard Number:

ITEM	Standard Number	Descriptions
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4XXXXC Chemical composition (mass fraction) (wt.%)

Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
0.35-0.42	0.70-1.00	0.15-0.40	≤0.003	≤0.003	1.25-1.55	1.20-1.60	0.65-0.85	0.35-0.50	
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other
≤0.20		≤0.30						≤0.03	Zr:0.03-0.09 B:0.002-0.004

4XXXXC 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	-

4XXXXC Mechanical Properties

Tensile strength	231-231	σb/MPa
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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	-

420C Heat Treatment Regime

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

420C 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 Tool Steel And Hard Alloy the specifications follows: