This page is mainly introduced the T20811 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of T20811,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 T20811

T20811 Standard Number:		
ITEM	Standard Number	Descriptions

T20811 Chemical composition(mass fraction)(wt.%)									
Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
0.33□0.43	0.80□1.20	0.20□0.50	≤0.030	≤0.030	4.75□5.50		1.10□1.60	0.30□0.60	
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Annealing hardness HBS: 235
Cold pull hardness HBS: 262
Preheat temperature / ℃ : 788
Quenching temperature / ℃ | salt bath furnaces: 996
Quenching temperature / ℃ | controlled atmosphere furnace: 1010
Holding time/min: 5 to 15
Quenching medium: air cold
Tempering temperature / ℃ : 552
After tempering quartile hardness HRC: 53

T20811 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	-

T20811 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	-

T20811 Heat Treatment Regime				
Annealing	**Quenching**	**Tempering**	**Normalizing**	**Q & T**
√	√	√	√	√

T20811 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 Tool Steel And Hard Alloy the specifications follows: