This page is mainly introduced the ASTM 1021 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of ASTM 1021,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Datasheet for Steel Grades Structure Steel ASTM 1021

ASTM 1021 Standard Number:		
ITEM	Standard Number	Descriptions

ASTM 1021 Chemical composition(mass fraction)(wt.%)									
Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
0.18□0.23		0.60□0.90	≤0.040	≤0.050					
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Note: 1. ASTM standard quality level of carbon steel rod can see ASTM cold A108-1999, its GangHao the chemical composition of the same with this form.
2. ASTM special levels of quality carbon steel rod can see the hot working ASTM A576 (90 b) (2000), the GangHao the chemical composition of the same with this form.
3. Require Si content (mass fraction), usually in the following 4 files a choice: 0.10% or Si, Si 0.10 ~ 0.20%, Si 0.20 ~ 0.40%, Si 0.30 ~ 0.60%.
4. Require Cu content (quality score) is 0.20% or Cu.

ASTM 1021 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	-

ASTM 1021 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	-

ASTM 1021 Heat Treatment Regime				
Annealing	**Quenching**	**Tempering**	**Normalizing**	**Q & T**
√	√	√	√	√

ASTM 1021 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 Structure Steel the specifications follows: