

This page is mainly introduced the ASTM A182 F55 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of ASTM A182 F55, 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 ASTM A182 F55

ASTM A182 F55 Standard Number:

ITEM	Standard Number	Descriptions
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ASTM A182 F55 Chemical composition (mass fraction) (wt.%)

Chemical			Min.(%)				Max.(%)		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
≤0.03	≤1.00	≤1.00	≤0.035	≤0.015	24.00~26.00	6.00~8.00	3.00~4.00		
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other
0.50~1.00	0.20~0.30	0.50~1.00							

Minimum Mechanical Properties at Room Temperature (EN10088-3 1.4501 UNS S32760 F55 160mm dia max - solution treated)

Tensile (UTS)	730 - 930 N/mm ²
0.2% Proof Stress	530 N/mm ² Min
Elongation	25% min
Hardness	290HB Max
Impact	100J

ASTM A182 F55 Physical Properties

Tensile strength	115-234	σ _b /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	-

ASTM A182 F55 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	-

ASTM A182 F55 Heat Treatment Regime

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

ASTM A182 F55 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: