

# Material: ASTM A 29 1021

## Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel and Bar

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A 29 1021 Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel and Bar

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Steel and Bar

Chemical Composition		
Carbon	C %	0.180 - 0.230
Manganese	Mn %	0.600 - 0.900
Phosphorus	P %	0.040 max.
Sulphur	S %	0.050 max.
Boron	B %	0.0005 - 0.003
Copper	Cu %	0.200 max.
Silicon	Si %	0.100 max.
Aluminium	Al %	0.020 max.
Niobium	Nb %	0.025 max.
Vanadium	V %	0.050 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment	
As Raw or Annealing or Normalizing or Hardening and Tempering	

Mechanical Properties	
Tensile Strength in Mpa	345 min.
Yield Strength in Mpa	230 min.
Elongation in %	5 min.
Reduction of Area in %	40 - 48
Hardness in HB	116 - 131
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10210	UNS	USA	Bars, Wire Rods and Tubing
1021	SAE	USA	Bending and Flaring
1021	AISI	USA	Tubing
A 1040 1021	ASTM	USA	Steel
A 510 1021	ASTM	USA	Wire Rod and Round Wire
A 512 Grade 1021	ASTM	USA	Tubing
A 513 Grade 1021	ASTM	USA	Tubing

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