



GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-29 Grade 81B45

Standard Specification for Steel Bars, Carbon and Alloy, Hot-Wrought and Cold-Finished,
General Requirements For

Group - Ferrous Mild Steel Alloys

Sub Group - ASME SA-29 Grade 81B45 Steel Bars, Carbon and Alloy, Hot-Wrought and Cold-Finished, General
Requirements For

Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries

Grade Belongs to the Industry - Steel and Bars

Chemical Composition			Heat Treatment	
Carbon	C %	0.430 - 0.480	As-Raw or Annealing or Normalizing or Hardening + Tempering	
Manganese	Mn %	0.750 - 1.000		
Phosphorus	P %	0.035 max.		
Sulphur	S %	0.040 max.		
Silicon	Si %	0.150 - 0.350		
Nickel	Ni %	0.200 - 0.400		
Chromium	Cr %	0.350 - 0.550		
Molybdenum	Mo %	0.080 - 0.150		
Iron	Fe %	Balance	Mechanical Properties	
-	-	-	Tensile Strength in Mpa	-
-	-	-	Yield Strength in Mpa	-
-	-	-	Elongation in %	-
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in HB	-
-	-	-	Impact in Joule	-

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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G81451	UNS	USA	Steel
SAE J 1249 81B45	AISI	USA	Steel
J 1249 81B45	SAE	USA	Steel
A 29 81B45	ASTM	USA	Steel and Bars
A 519 81B45	ASTM	USA	Steel and Tubing
A 752 Grade 81B45	ASTM	USA	Wire and Wire Rods
A 322 81B60	ASTM	USA	Steel and Bars

Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email marketing@gravitycastindia.com

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.

ONE STOP SOLUTION FOR METAL PARTS