GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - IS 2004 45C8 Class 4

Standard Specification for Carbon Steel Forgings for General Engineering Purposes

Group - Ferrous Mild Steel Alloys

Sub Group - IS 2004 45C8 Class 4 Carbon Steel Forgings for General Engineering Purposes

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

Grade Belongs to the Industry - Forging

Chemical Composition		
Carbon	C %	0.400 - 0.500
Silicon	Si %	0.150 - 0.350
Manganese	Mn %	0.600 - 0.900
Sulphur	S %	0.040 max.
Phosphorus	P %	0.040 max.
Nickel	Ni %	0.300 max.
Chromium	Cr %	0.300 max.
Copper	Cu %	0.250 max.
Molybdenum	Mo %	0.050 max.
Vanadium	V %	0.050 max.
Tin	Sn %	0.050 max.
Boron	B %	0.0003 max.
Iron	Fe %	Balance
-	-	-
-	-	-

Heat Treatment
As-Raw or Normalizing

Mechanical Properties	
Tensile Strength in Mpa	620 min.
Yield Strength in Mpa	320 min.
Elongation in %	15 min.
Reduction of Area in %	-
Hardness in HB	175 max.
Impact in Joule	-

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
J 1397 4047	SAE	USA	Steel and Bars
G 4051 S 43 C	JIS	Japan	Steel
G 4051 S 45 C	JIS	Japan	Steel
SA-29 Grade 4047	ASME	USA	Steel and Bars
SA-29 Grade 4042	ASME	USA	Steel and Bars
A 290 Class D	ASTM	USA	Steel
A 290 Class C	ASTM	USA	Steel

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.