



**GRAVITY CAST PVT. LTD.**  
**GRAVITY GROUP OF COMPANIES**

## Material - AS 3

### Standard Specification for Carbon Steels and Carbon Manganese Steels - Hot Rolled Bars and Semi Finished Products

Group - Ferrous Mild Steel Alloys

Sub Group - AS 3 Carbon Steels and Carbon Manganese Steels - Hot Rolled Bars and Semi Finished Products

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

Grade Belongs to the Industry - Hot Rolled Bar

Chemical Composition			Heat Treatment															
Carbon	C %	0.250 max.	Annealing or Normalising or Hardening + Tempering															
Silicon	Si %	0.100 - 0.400																
Manganese	Mn %	1.400 max.																
Phosphorus	P %	0.040 max.																
Sulphur	S %	0.040 max.																
Chromium	Cr %	0.300 max.																
Nickel	Ni %	0.350 max.																
Molybdenum	Mo %	0.100 max.																
Copper	Cu %	0.350 max.																
Iron	Fe %	Balance																
-	-	-	<table border="1"> <thead> <tr> <th colspan="2">Mechanical Properties</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength in Mpa</td> <td>410 min.</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>230 min.</td> </tr> <tr> <td>Elongation in %</td> <td>22 min.</td> </tr> <tr> <td>Reduction of Area in %</td> <td>-</td> </tr> <tr> <td>Hardness in BHN</td> <td>-</td> </tr> <tr> <td>Impact in Joule</td> <td>-</td> </tr> </tbody> </table>		Mechanical Properties		Tensile Strength in Mpa	410 min.	Yield Strength in Mpa	230 min.	Elongation in %	22 min.	Reduction of Area in %	-	Hardness in BHN	-	Impact in Joule	-
Mechanical Properties																		
Tensile Strength in Mpa	410 min.																	
Yield Strength in Mpa	230 min.																	
Elongation in %	22 min.																	
Reduction of Area in %	-																	
Hardness in BHN	-																	
Impact in Joule	-																	
-	-	-																
-	-	-																
-	-	-																
-	-	-																
-	-	-																
-	-	-																

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1.0457	EN	European Union	Pipes
1.0484	DIN	Germany	Pipes
13030	CSN	Czech Republic	Steel
20MB5	AFNOR NF	France	Cold Rolled, Strip
230 - 450 W	JIS	Japan	Casting
J13005	UNS	USA	Casting
A487 2A	ASTM	USA	Casting

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