GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-182 Grade F 1

Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

Group - Ferrous Mild Steel Alloys

Sub Group - ASME SA-182 Grade F 1 Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

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

Grade Belongs to the Industry - Pipe and Forging

Chemical Composition		
Carbon	C %	0.280 max.
Manganese	Mn %	0.600 - 0.900
Phosphorus	P %	0.045 max.
Sulphur	S %	0.045 max.
Silicon	Si %	0.150 - 0.350
Molybdenum	Mo %	0.440 - 0.650
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Annealing or Normalising & Tempering

Mechanical Properties	
Tensile Strength in Mpa	485 min.
Yield Strength in Mpa	275 min.
Elongation in %	20 min.
Reduction of Area in %	30 min.
Hardness in BHN	143 - 192
Impact in Joule	-

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
K12822	UNS	USA	Steel
K12121	UNS	USA	Steel
20 MnMo 3-5	DIN	Germany	Steel
1.5421	DIN	Germany	Steel
A 182 F 1	ASTM	USA	Steel and Pipe
G 3103 SB 450 M	JIS	Japan	Steel and Plates
G 3103 SB 46 M	JIS	Japan	Steel and Plates

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.