



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

## Material - ASME SA-182 Grade F 50

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

**Group - Ferrous Stainless Steel Alloys**

**Sub Group - ASME SA-182 Grade F 50 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			Heat Treatment	
Carbon	C %	0.030 max.	Solution Annealing	
Manganese	Mn %	2.000 max.		
Phosphorus	P %	0.045 max.		
Sulphur	S %	0.030 max.		
Silicon	Si %	1.000 max.		
Nickel	Ni %	5.500 - 6.500		
Chromium	Cr %	24.000 - 26.000		
Molybdenum	Mo %	1.200 - 2.000		
Nitrogen	N %	0.140 - 0.200		
Iron	Fe %	Balance		
-	-	-	<b>Mechanical Properties</b> Tensile Strength in Mpa 690 - 900 Yield Strength in Mpa 450 min. Elongation in % 25 min. Reduction of Area in % 50 min. Hardness in BHN - Impact in Joule -	
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
S31200	UNS	USA	Steel
A 240 S31200	ASTM	USA	Plate, Sheet and Strip
A 182 F 50	ASTM	USA	Steel and Pipe
A 789 S31200	ASTM	USA	Steel and Tubing
A 790 S31200	ASTM	USA	Steel and Pipe
A 959 S31200	ASTM	USA	Steel
SA-240 UNS S31200	ASME	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](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**