GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASTM A336 Grade F11 Class 3

Standard Specification for Alloy Steel Forgings for Pressure and High-Temperature Parts

Group - Ferrous Mild Steel Alloys

Sub Group - ASTM A336 Grade F11 Class 3 Alloy Steel Forgings for Pressure and High-Temperature Parts

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

Grade Belongs to the Industry - Forging

Chemical Composition		
Carbon	C %	0.100 - 0.200
Manganese	Mn %	0.300 - 0.800
Phosphorus	P %	0.025 max.
Sulphur	S %	0.025 max.
Silicon	Si %	0.500 - 1.000
Chromium	Cr %	1.000 - 1.500
Molybdenum	Mo %	0.450 - 0.650
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
As-Raw or Normalizing or Quenching & Tempering

Mechanical Properties	
Tensile Strength in Mpa	515 - 690
Yield Strength in Mpa	310 min.
Elongation in %	18 min.
Reduction of Area in %	40 min.
Hardness in HB	-
Impact in Joule	-

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
K11598	UNS	USA	Steel
K11597	UNS	USA	Steel
A 250 Grade T11	ASTM	USA	Steel and Tubing
A 335 Grade P11	ASTM	USA	Steel and Pipe
A 369 Grade FP11	ASTM	USA	Steel and Pipe
A 213 Grade T11	ASTM	USA	Steel and Tubing
SA-213 Grade T11	ASME	USA	Steel and Tubing

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.