GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-541 Grade 5 Class 1

Standard Specification for Quenched and Tempered Carbon and Alloy Steel Forgings for Pressure Vessel Components

Group - Ferrous Mild Steel Alloys

Sub Group - ASME SA-541 Grade 5 Class 1 Quenched and Tempered Vacuum-Treated Carbon and Alloy Steel Forgings for Pressure Vessels

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

Grade Belongs to the Industry - Forging

Chemical Composition		
Carbon	C %	0.230 max.
Manganese	Mn %	0.200 - 0.400
Phosphorus	P %	0.025 max.
Sulphur	S %	0.025 max.
Silicon	Si %	0.300 max.
Nickel	Ni %	2.800 - 3.900
Chromium	Cr %	1.250 - 2.000
Molybdenum	Mo %	0.400 - 0.600
Vanadium	V %	0.080 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Quenching & Tempering

Mechanical Properties	
Tensile Strength in Mpa	725 - 895
Yield Strength in Mpa	585 min.
Elongation in %	18 min.
Reduction of Area in %	48 min.
Hardness in HB	-
Impact in Joule	47 @ RT

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
K42348	UNS	USA	Steel
A 541 Grade 4N Class 2	ASTM	USA	Steel and Forging
A 541 Grade 4N Class 3	ASTM	USA	Steel and Forging
A 541 Grade 5 Class 1	ASTM	USA	Steel and Forging
A 541 Grade 5 Class 2	ASTM	USA	Steel and Forging
A 541 Grade 4N Class 3	ASTM	USA	Steel and Forging
A 508 Grade 4N Class 1	ASTM	USA	Steel and Forging

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.