



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

## Material - ASTM A990 Grade CK3MCuN

**Standard Specification for Castings, Iron-Nickel-Chromium and Nickel Alloys, Specially Controlled for Pressure Retaining Parts for Corrosive Service**

**Group - Ferrous Stainless Steel Alloys**

**Sub Group - ASTM A990 / A990M for Castings, Iron-Nickel-Chromium and Nickel Alloys, Specially Controlled for Pressure Retaining Parts for Corrosive Service**

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

**Grade Belongs to the Industry - Casting**

Chemical Composition			Heat Treatment	
Carbon	C %	0.025 max.	Solution Annealing	
Silicon	Si %	0.750 max.		
Manganese	Mn %	1.200 max.		
Phosphorus	P %	0.020 max.		
Sulphur	S %	0.010 max.		
Chromium	Cr %	19.500 - 20.500		
Nickel	Ni %	17.500 - 19.500		
Molybdenum	Mo %	6.000 - 7.000		
Copper	Cu %	0.500 - 1.000		
Nitrogen	N %	0.180 - 0.240		
Iron	Fe %	Balance	<b>Mechanical Properties</b> Tensile Strength in Mpa      550 min. Yield Strength in Mpa      260 min. Elongation in %      35 min. Reduction of Area in %      - Hardness in BHN      - Impact in Joule      -	
-	-	-		
-	-	-		
-	-	-		
-	-	-		
-	-	-		

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
A351 CK3MCuN	ASTM	USA	Casting
SA-351 CKMCuN	ASME	USA	Casting
Z 4 CND 19.13 M	AFNOR NF	France	Casting
317 C 12	BS	British	Casting
422940	CSN	Czech Republic	Casting
J92810	UNS	USA	Casting
J93254	UNS	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**