



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

## Material - ASME SB-637 N07718

**Standard Specification for Nickel Alloy Bars, Forgings, and Forging Stock for High-Temperature Service**

**Group - Non-Ferrous Nickel Alloys**

**Sub Group - ASME SB-637 N07718 Nickel Alloy Bars, Forgings, and Forging Stock for High-Temperature Service**

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

**Grade Belongs to the Industry - Bar and Forging**

Chemical Composition			Heat Treatment	
Carbon	C %	0.080 max.	As-Cast or Annealing or Age Hardning	
Silicon	Si %	0.350 max.		
Manganese	Mn %	0.350 max.		
Chromium	Cr %	17.000 - 21.000		
Molybdenum	Mo %	2.800 - 3.300		
Aluminium	Al %	0.200 - 0.800		
Nb + Ta	Nb% + Ta%	4.750 - 5.500		
Phosphorus	P %	0.015 max.		
Sulphur	S %	0.015 max.	Mechanical Properties	
Cobalt	Co %	1.000 max.	Tensile Strength in Mpa	1275 min.
Titanium	Ti %	0.650 - 1.150	Yield Strength in Mpa	1034 min.
Nickel	Ni %	50.000 - 55.000	Elongation in %	12 min.
Copper	Cu %	0.300 max.	Reduction of Area in %	15 min.
Boron	B %	0.006 max.	Hardness in HRC	36 min.
Iron	Fe %	Balance	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
Inconel 718	SAE	USA	Tube
N07718	UNS	USA	Tube
WL 2.4668	DIN	Germany	Bars and Wire for Screws and Bolts
B983 N07718	ASTM	USA	Pipe and Tube
B637 N07718	ASTM	USA	Bar and Forging
B670 N07718	ASTM	USA	Plate, Sheet and Strip
SB-834 N07718	ASME	USA	Pipe Flange, Fitting and Valve

**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**