

## Material - UNS N09946

Standard Specification for Seamless Nickel and Nickel Alloy Pipe, Tube, Sheet, Strip, Plate, Round Bar, Flat Bar, Forging Stock, Hexagon and Wire

**Group - Non-Ferrous Nickel Alloys** 

Sub Group - UNS N09946 Seamless Nickel and Nickel Alloy Pipe, Tube, Sheet, Strip, Plate, Round Bar, Flat Bar, Forging Stock, Hexagon and Wire

Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries Grade Belongs to the Industry - Pipe, Tube, Sheet, Strip, Plate, Hexagon and Wire

Chemical Composition			Heat Treatment	
Carbon	C %	0.005 - 0.030		
Silicon	Si %	0.500 max.		
Manganese	Mn %	1.000 max.		
Chromium	Cr %	19.500 - 22.500	As-Cast or Annealing or Age Hardning	or Age Hardning
Sulphur	S %	0.010 max.		
Molybdenum	Mo %	3.000 - 4.000		
Copper	Cu %	1.500 - 3.000		
Aluminium	Al %	0.010 - 0.700		_
Phosphorus	P %	0.030 max.	Mechanical Properties	
Niobium	Nb %	3.500 - 4.500	Tensile Strength in Mpa	1291 - 1310
Titanium	Ti %	0.500 - 2.500	Yield Strength in Mpa	1086 - 1135
Nickel	Ni %	50.000 - 55.000	Elongation in %	19.6 - 23.3
Iron	Fe %	Balance	Reduction of Area in %	37.1 - 41.2
-	-	-	Hardness in HRC	37.1 - 41.2
-	-	-	Impact in Joule	-

Cross Reference Table					
Material	Standard	Country	Grade Belong to the Industry		
Incoloy Alloy 945X	Gravity	India	Pipe, Tube, Sheet, Strip, Plate, Hexagon and Wire		
-	-		-		
-	-		-		
-	-	-	-		
-	-	-	-		
-	-	-	-		
-	-	-	-		

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.