



Material - IS 12549

Standard Specification for Iron Nickel Cobalt Sealing Alloys

Group - Ferrous Iron-Nickel-Cobalt Alloys

Sub Group - IS 12549 Iron-Nickel-Cobalt Alloy for Sealing Application

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

Grade Belongs to the Industry - Wire, Rod, Sheet and Strips

Chemical Composition			Heat Treatment															
Carbon	C %	0.040 max.	Annealing															
Silicon	Si %	0.200 max.																
Manganese	Mn %	0.500 max.																
Chromium	Cr %	0.200 max.																
Molybdenum	Mo %	0.200 max.																
Copper	Cu %	0.200 max.																
Titanium	Ti %	0.100 max.																
Zirconium	Zr %	0.100 max.																
Aluminium	Al %	0.100 max.																
Magnesium	Mg %	0.100 max.																
Nickel	Ni %	29.000 min.	<table border="1"> <thead> <tr> <th colspan="2">Mechanical Properties</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength in Mpa</td> <td>570 max.</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>-</td> </tr> <tr> <td>Elongation in %</td> <td>-</td> </tr> <tr> <td>Reduction of Area in %</td> <td>-</td> </tr> <tr> <td>Hardness in HRB</td> <td>82 max.</td> </tr> <tr> <td>Impact in Joule</td> <td>-</td> </tr> </tbody> </table>		Mechanical Properties		Tensile Strength in Mpa	570 max.	Yield Strength in Mpa	-	Elongation in %	-	Reduction of Area in %	-	Hardness in HRB	82 max.	Impact in Joule	-
Mechanical Properties																		
Tensile Strength in Mpa	570 max.																	
Yield Strength in Mpa	-																	
Elongation in %	-																	
Reduction of Area in %	-																	
Hardness in HRB	82 max.																	
Impact in Joule	-																	
Cobalt	Co %	17.000 min.																
Iron	Fe %	53.000 min.																
-	-	-																
-	-	-																

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
AMS 77260	SAE	USA	Wire, Rod, Sheet and Strips
AMS 77270	SAE	USA	Wire, Rod, Sheet and Strips
AMS 77280	SAE	USA	Wire, Rod, Sheet and Strips
K94 610	UNS	USA	Wire, Rod, Sheet and Strips
K94 630	UNS	USA	Wire, Rod, Sheet and Strips
N94 620	UNS	USA	Wire, Rod, Sheet and Strips
N94 630	UNS	USA	Wire, Rod, Sheet and Strips

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.