

Wipro 3D – IN625

IN625 is a solid solution strengthened nickel-chromium-molybdenum-niobium alloy used for diverse applications requiring high strength as well as corrosion and/or oxidation resistance.

Characteristics of the Alloy:

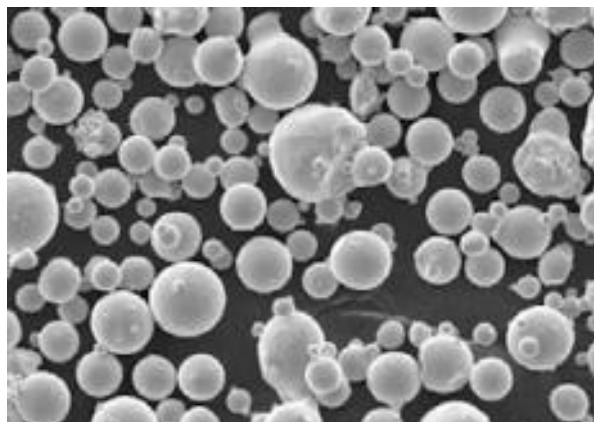
- Combination of high strength and ductility at ambient and elevated temperatures
- Good corrosion resistance in a variety of environments
- Oxidation resistance
- Good fabricability

Applications

- Various applications, from cryogenic to elevated temperatures
- Parts for chemical processing
- Gas turbine components
- Parts in sea water service
- High performance automotive engine parts

Chemical Composition

Chemical composition of raw material and built parts is compliant to table given below.

Chemical Composition (weight%)				SEM Morphology
Element	Limitations	Element	Limitations	
Cr	20-23	C	0.1max	
Mo	8-10	Ta	0.05max	
Nb	3.15-4.15	P	0.015max	
Fe	5.0 max	S	0.015max	
Ti	0.4 max	Ni	Balance	
Al	0.4 max			
Co	1.0max			
Si	0.5max			
Mn	0.5max			

Mechanical properties

Mechanical properties of built parts confirm to below.

Properties	HT condition
Tensile Strength (MPa)	>850
Yield Strength (MPa)	>600
Elongation (%)	>20
Reduction in Area (%)	>30

There are various heat treatment methods for improving strength and/or elongation, hence if the user provides exact requirements, it can be discussed to achieve these properties.

Disclaimer: While every reasonable effort has been made to ensure that the information contained in this data sheet is correct, there is no guarantees or warranties (express or implied) concerning the accuracy or completeness of the information provided and expressly excludes all liabilities for any inaccuracies in this document or failure to achieve the stated levels.
