



PRODUCT DATASHEET

725

Grade

Alloy 725 (UNS N07725, ASTM B637, API 6A CRA 1st Edition Addendum 3)

Type

Annealed Nickel-Chromium-Iron based alloy.

Overview

Grade has very high strength and can be heat treated to varying strength levels by carefully modification of the age hardening cycle parameters.

Excellent corrosion resistance and so is used in a range of severe corrosive environments for applications such as hangers, gates and stems.

Can be used as a direct alternative to Nickel 625 Plus.

Maximum hardness shown is based on compliance with NACE MRO175 / ISO 15156.

Composition	
Element	Weight%
Carbon	0.03 max
Silicon	0.2 max
Manganese	0.35 max
Phosphorus	0.015 max
Sulphur	0.01 max
Molybdenum	7 - 9.5
Chromium	19 - 22.5
Nickel	55 - 59
Aluminium	0.35 max
Titanium	1 - 1.7
Manganese	0.35 max
Niobium	2.75 - 4

Mechanical Propeties

Solution annealed followed by age hardening

Property	Values
0.2% Yeild Strength	120 KSI min (827 MPA min)
Ultimate Tensile Strength	150 KSI min (1034 MPA min)
Elongation	20
Reduction of area	≤10" 35% min / >10" 25%
Charpy Impact Toughness	< 3" 54J ave / 47J single / 0.38mm lats (L) ≥3" - 10" 50J ave / 43J single / 0.38mm lats (T) >10" 43J ave / 37J single / 0.38mm lats (T) all at -60°C
Hardness	43 HRC max

Notes: L = Longitudinal direction, T = Transverse direction