



Alloy 6Mo

Alloy Designation: (UNS S31254)

Specifications: ASTM A269, ASTM A213

Typical Size Ranges: OD (.02"-1.00")

Available Product Forms:

Annealed to Full Hard, in Coiled or Straight form

General Description and Applications:

This austenitic stainless steel alloy contains 6% molybdenum by weight as well as nitrogen, which greatly increases corrosion resistance, especially to pitting corrosion. With great immunity to the corrosive effects of chloride ions, 6Mo is able to withstand harsh marine environments and is commonly used in water desalination equipment, paper mills, chemical processing, and the oil and gas industry.

Commitment to Quality:

ISO 9001-
CERTIFIED



SHIPBUILDING
CERTIFICATIONS



HIGH PRESSURE
APPLICATIONS



AD-2000-Merkblatt-W0

PED
2014 / 68 / EU

Plant & Headquarters
124 Veeco Blvd.
Camden, DE 19934

sales@handytube.com
+1 (302) 697-9521
www.HandyTube.com

Chemical Properties as per Specs:

CHEMICAL COMPOSITION BY WEIGHT PERCENT															
Ni	Cr	Fe	Mo	Al	Ti	Nb	Co	Ta	Mn	Cu	N	C	S	Si	P
17.5 - 18.5	19.5 - 20.5	Bal.	6.00 - 6.50	-	-	-	-	-	1.00 Max	-	.18 - .25	.020 Max	.015 Max	0.80 Max	-

PREN CALCULATION AND NUMBER:

- $PREN = Cr + 3.3(Mo + 0.5W) + 16N$
- $MIN\ PREN = 19.5 + 3.3(6) + 16(.18) = 42.18$
- $MAX\ PREN = 20.5 + 3.3(6.5) + 16(.25) = 44.95$
- PREN Range: 42.18 - 44.95

MECHANICAL PROPERTIES	
Ultimate Tensile Strength	94.3 ksi Minimum (650.2 MPa)
Yield Strength	43.5 ksi Minimum (299.9 MPa)
43.5 ksi Minimum (299.9 MPa)	35% Minimum
Hardness	96 HRB Max
Young's Modulus	28.3×10^6 ksi (195 GPa)

PHYSICAL PROPERTIES	
Density	0.289 lb/in ³ or 8.0 g/cm ³
Melting Point	2470 - 2560°F or 1354 - 1404°C
Coefficient of Thermal Expansion	9.2 (μin/in-°F)
Specific Heat	0.11 BTU/lb-°F
Thermal Conductivity	14.0 (W/m.K)
Electrical Resistivity	0.85 μΩm

ANNEALING SUGGESTION:

- 6Mo is best annealed between the temperatures of 2100-2210 degrees Fahrenheit or 1149-1210 degrees Celsius.

Disclaimer: Always consult with design engineer, the information contained in this data sheet is for guidance only.