

STAINLESS STEEL ALLOY 625

(UNS N06625)

TUBING APPLICATIONS

Alloy 625 is a nickel-chromium alloy known for its high strength, excellent fabricability and superb corrosion resistance. The strength of alloy 625 is derived from the stiffening effect of molybdenum and niobium on its nickel-chromium matrix.

Alloy 625 has good resistance to oxidation and scaling at high temperatures, ranging from cryogenic to 1800°F.

AVAILABLE TUBE PRODUCT FORMS

STRAIGHT, COILED, SEAMLESS

SEAMLESS WELDED, COLD DRAWN AND ANNEALED

TYPICAL MANUFACTURING SPECIFICATIONS

ATSM B444 BS 3074

AMS 5581

Also individual customer specifications.

TYPICAL APPLICATIONS

Wellhead Components

Sheathing

Downhold Equipment for Corrosive/Sour Service

Reactor Core

Control Rod Components

Heat Exchangers

Oil Refining

Chemical Processing

Control and Instrumentation Tubes

INDUSTRIES PREDOMINANTLY USING THIS GRADE

CHEMICAL PROCESSES

NUCLEAR AND POWER

OIL AND GAS

TECHNICAL DATA

MECHANICAL PROPERTIES

Temper	Annealed (Grade 1)		Solution-treated (Grade 2)	
Tensile Rm	120	ksi (min)	100	ksi (min)
Tensile Rm	827	MPa (min)	690	MPa (min)
R.p. 0.2% Yield	60	ksi (min)	40	ksi (min)
R.p. 0.2% Yield	414	MPa (min)	276	MPa (min)
Elongation (2" or 4D gl)	30	% (min)	30	% (min)

PHYSICAL PROPERTIES (Room Temperature)

Specific Heat (0-100°C)	460	J.kg ⁻¹ .°K ⁻¹
Thermal Conductivity	14.8	W.m ⁻¹ .°K ⁻¹
Thermal Expansion	12.4	mm / m / °C
Modulus Elasticity	207	GPa
Electrical Resistivity	10.3	μohm / cm
Density	8.42	g / cm ³

CHEMICAL COMPOSITION (% by weight)

Element	Min	Max
C	-	0.1
Si	-	0.5
Mn	-	0.5
P	-	0.015
S	-	0.015
Al	-	0.4
Cr	20	23
Fe	-	5
Mo	8	10
Nb	3.150	4.150
Ni	Balance	
Ti	-	0.40

Disclaimer: The information contained within this data sheet is for guidance only and is not intended for warranty of individual application - express or implied.

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