

# STAINLESS STEEL

# ALLOY 400

(UNS N04400)

## TUBING APPLICATIONS

Alloy 400 is a nickel-copper solid solution with superior resistance to a wide array of corrosive environments and temperatures. This alloy can only be hardened through cold working, rather than heat treatment.

Alloy 400 exhibits characteristics such as corrosion resistance, good weldability and high strength.

## AVAILABLE TUBE PRODUCT FORMS

STRAIGHT  
 COILED  
 SEAMLESS  
 SEAM WELDED, COLD DRAWN AND ANNEALED

## TYPICAL MANUFACTURING SPECIFICATIONS

ATSM B163      AMS4574  
 ATSM B165

Also individual customer specifications.

## TYPICAL APPLICATIONS

Heat Exchangers  
 Steam Generators  
 Reboiler Tubes  
 Brine Heaters and Evaporator Bodies in Salt Plant  
 Nuclear Core Cooling Tubes  
 Sulphuric and Hydrofluoric Acid Alkylation Plant  
 Control Lines

## INDUSTRIES PREDOMINANTLY USING THIS GRADE

CHEMICAL PROCESSES  
 OIL AND GAS  
 NUCLEAR AND POWER

## TECHNICAL DATA

### MECHANICAL PROPERTIES

Temper	Annealed	
	Tensile Rm	70
Tensile Rm	480	MPa (min)
R.p. 0.2% Yield	28	ksi (min)
R.p. 0.2% Yield	195	MPa (min)
Elongation (2" or 4D gl)	40	% (min)

### PHYSICAL PROPERTIES (Room Temperature)

Specific Heat (0-100°C)	427	J.kg <sup>-1</sup> .°K <sup>-1</sup>
Thermal Conductivity	21.8	W.m <sup>-1</sup> .°K <sup>-1</sup>
Thermal Expansion	13.9	mm / m / °C
Modulus Elasticity	173	GPa
Electrical Resistivity	5.47	μohm / cm
Density	8.83	g / cm <sup>3</sup>

### CHEMICAL COMPOSITION (% by weight)

Element	Min	Max
C	-	0.3
Si	-	0.5
Mn	8	2
S	18	0.24
Cu	Balance	
Fe	-	2.50
Ni	63	70

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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