



## Incoloy Alloy 825®

*Incoloy Alloy 825® is a nickel-iron-chromium alloy with the elements molybdenum, copper and titanium. Alloy 825 offers excellent resistance to many corrosives, especially phosphoric and sulphuric acids. Because of its nickel content, this material shows excellent stress corrosion cracking resistance. It also offers good resistance against localised attack, such as crevice corrosion & pitting, as well as good mechanical performance in room temp and up to approximately 540°C.*

*Incoloy Alloy 825 is used in many applications where the working temperature is no more than 550°C, including oil refinery in air heat exchangers, components in pickling equipment, nuclear fuel reprocessing, heat exchanger, components for marine product pipeline system and gas pipeline in acidic environments. Alloy 825 is also used in sulphuric acid factory components for heating pipe, container etc.*

### Incoloy Alloy 825 Grades & Equivalents:

- ASTM B425 N08825
- ASME SB425 N08825
- ASTM B564 N08825
- ASME SB564 N08825
- BS3076 NA16
- 2.4858
- ASTM B163 N08825
- ASTM B423 N08825
- ASTM B424 N08825
- ASTM B704 N08825
- ASTM B705 N08825
- NACE MR0175

### Typical Chemical Analysis

C	Si	Mn	P	S	Cr	Ni	Mo
0.05	0.50	1.00		0.03	19.5-23.5	38.0-46.0	2.5-3.5
W	N	Cb/Nb	Ti	Co	Cu	Al	B
			0.6-1.2		1.5-3.0	0.20	
V	Fe	Mg	Ta	Ca	O	Bi	Se
	22.0 min						
Sn	Zn	Pb	Y	Cb/Nb + Ta	Ni + Co	H	PREN

### Typical Mechanical Properties

Tensile Strength	586 N/mm <sup>2</sup> min
0.2% Proof Stress	241 N/mm <sup>2</sup> min
Elongation	30%
Reduction of Area	
Hardness	
Impacts	
Stress Rupture	
Other Remarks	

### Product Forms Available:

- Hexagon Head Bolts
- Hexagon Nuts
- Studbolts
- Socket Capscrews
- Socket Countersunk Screws
- Socket Setscrews
- & Many other special fasteners and bespoke machined parts

*Products can be produced to customer drawings or relevant British (BS), American (ASME, ANSI), European (DIN, UNI) or International Standards (ISO).*

*The size ranges M3 to M120 Metric and 3/16" to 4.75" Imperial can be supplied. Thread forms include UNC, UNS, UNF, BSW, BSF, Whitworth, Metric, Metric Fine.*



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