



## DUPLEX 2205

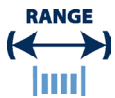
### Key Features

- Greater corrosion resistance than stainless steel 300 series
- Greater pitting resistance and uniform corrosion resistance to stress corrosion cracking than stainless steel 300 series
- Good weldability

### IMPORTANT

We will manufacture to your required mechanical properties.

## key advantages to you, *our customer*



0.025mm to 21mm  
(.001" to .827")



Order 3m to 3t  
(10 ft to 6000 Lbs)



Delivery:  
within 3 weeks



Wire to your spec



E.M.S available



Technical support

### DUPLEX 2205 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

### Packaging

- Coils
- Spools
- Bars or lengths



# DUPLEX 2205



Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	ASTM A479 ISO 15156-3 (NACE MR 0175)	Greater corrosion resistance than stainless steel 300 series  Greater pitting resistance and uniform corrosion resistance to stress corrosion cracking than stainless steel 300 series  Good weldability	Chemical processing Oil and gas refining Marine environments Pollution control equipment
C	-	0.03			
Si	-	1.00	<b>Designations</b>		
Mn	-	2.00			
P	-	0.035	W.Nr. 1.4462 UNS S31803 2205 AWS 167		
S	-	0.015			
Cr	21.00	23.00			
Ni	4.50	6.50			
Mo	2.50	3.50			
N	0.10	0.22			
Fe	BAL				

<b>Density</b>	7.8 g/cm <sup>3</sup>	0.282 lb/in <sup>3</sup>
<b>Melting Point</b>	1470 °C	2680 °F
<b>Coefficient of Expansion</b>	13.7 µm/m °C (21 – 100 °C)	7.61 x 10 <sup>-6</sup> in/in °F (70 – 212 °F)
<b>Modulus of Rigidity</b>	76.9 kN/mm <sup>2</sup>	11154 ksi
<b>Modulus of Elasticity</b>	200 kN/mm <sup>2</sup>	29008 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Annealed or Spring Temper	Stress Relieve	250	480	1	Air

Properties				
Condition	Approx. tensile strength		Approx. operating temperature	
	N/mm <sup>2</sup>	ksi	°C	°F
Solution Annealed	<1100	<159	-200 to +300	-330 to +570
Spring Temper	1300 – 1900	189 – 276	-200 to +300	-330 to +570

The above tensile strength ranges are typical. If you require different please ask.