### Technical Datasheet AWS 169 Rev.2



# **SUPER DUPLEX**

#### **Key Features**

Excellent resistance to stress corrosion cracking in chloride-bearing environments

Excellent resistance to pitting and crevice corrosion

High resistance to general corrosion

IMPORTANT We will manufacture to your required mechanical properties.

### key advantages to you, our customer



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





E.M.S available

(10 ft to 6000 Lbs)





Technical support

### SUPER DUPLEX available in:-

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

### Packaging

Coils Spools Bars or lengths

## SUPER DUPLEX



Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	ISO 15156-3	Excellent resistance to stress corrosion	Oil and gas exploration
С	-	0.03	(NACE MR 0175)	cracking in chloride-bearing environments	Marine application
Mn	-	1.2	Designations	Excellent resistance to pitting and crevice corrosion	
Si	-	0.80	W.Nr. 1.4410 UNS S32750 2507	High resistance to general corrosion	
S	-	0.015			
Р	-	0.035	AWS 169		
Cr	24.00	26.0			
Ni	6.0	8.0			
Мо	3.0	4.5			
N	0.24	0.35			
Cu	-	0.5			
Fe	Fe BAL				

Density	7.8 g/cm <sup>3</sup>	0.28 lb/in <sup>3</sup>	
Melting Point	1350 °C	2460 °F	
Coefficient of Expansion	<b>13.5 μm/m °C (25 – 100 °C)</b> 7.5 x 10 <sup>-6</sup> in/in °F (70 – 200 °F)		
Modulus of Rigidity	77 kN/mm²	11000 ksi	
Modulus of Elasticity	200 kN/mm <sup>2</sup>	29000 ksi	

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

Properties							
Condition	Approx. tensile stren	gth	Approx. operating temperature				
Condition	N/mm²	ksi	°C	°F			
Solution Annealed	< 1000	< 145	-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.

