



PHYNOX⁺

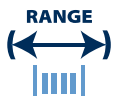
Key Features

- Combination of high strength, ductility and good mechanical properties at ambient temperatures
- Excellent fatigue life
- Excellent corrosion resistance in numerous environments
- Non magnetic
- Age hardenable (Spring Temper only)
- Good for sea water applications

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

PHYNOX⁺ available in:-

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

Packaging

- Coils
- Spools
- Bars or lengths



[†]Trade name of Aperam Alloys Imphy.

Chemical Composition			Specifications	Key Features	Typical Applications	
Element	Min %	Max %	AMS 5833 AMS 5834 AMS 5876 ASTM F1058 ISO 5832-7 ISO 15156-3 (NACE MR 0175)	Combination of high strength, ductility and good mechanical properties at ambient temperatures Excellent fatigue life Excellent corrosion resistance in numerous environments Non magnetic Age hardenable (Spring Temper only) Good for sea water applications	Springs Seal components Medical devices Components for watches Aerospace applications Petrochemical applications Marine engineering	
C	-	0.15				
Mn	1.50	2.50				
Si	-	1.20				
P	-	0.015				
S	-	0.015				
Cr	19.00	21.00				Designations
Ni	14.00	16.00				W.Nr. 2.4711
Co	39.00	41.00				UNS R30003
Mo	6.00	8.00				UNS R30008
Be	-	0.10	AWS 100			
Fe	BAL					

Density	8.3 g/cm ³	0.300 lb/in ³
Melting Point	1427 °C	2600 °F
Coefficient of Expansion	12.5 µm/m °C (20 – 100 °C)	7.0 x 10 ⁻⁶ in/in °F (70 – 212 °F)
Modulus of Rigidity	77 kN/mm ²	11168 ksi
Modulus of Elasticity	203.4 kN/mm ²	29501 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Annealed	-	-	-	-	-
Spring Temper	Age Harden	520	970	5	Air

Properties				
Condition	Approx. tensile strength		Approx. operating temperature	
	N/mm ²	ksi	°C	°F
Annealed	< 1100	< 160	-185 to +450	-300 to +840
Spring Temper	1400 – 1900	203 – 276	-185 to +450	-300 to +840
Spring Temper + Aged	1900 – 2200	276 – 319	-185 to +450	-300 to +840

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