

## **ELGILOY** Specialty Metals – Wire Products

## Udimet® alloy L605 (Haynes® alloy 25)

UNS R30605 W.Nr 2.4964/2.4967

Udimet® alloy L605 (Haynes® alloy 25) is a Cobalt-Chromium-Tungsten solid-solution strengthened alloy with excellent mechanical strength and oxidation resistance at high temperatures. This alloy also has good fatigue resistance and galling resistance.

Applications include bearings, shafts, springs and surgical fixation wire.

Industries supplied include: Medical and Aerospace.

Nominal Composition										
	Cr	W	Ni	Fe	Mn	Co	Si	С	Р	S
min	19	14	9		1			0.05		
max	21	16	11	3	2	balance	0.40	0.15	0.04	0.03

Physical Properties					
	At 70°F	At 20°C			
Density	0.335 lb/in <sup>3</sup>	9.27 g/cm <sup>3</sup>			
Modulus of Elasticity (E)	32.6 x 10 <sup>3</sup> ksi	225 GPa			
Coefficient of Expansion	7.6 microinches/in°F (70-600°F)	13.6 x μm/m-°C (20-300°C)			

88.6 μ ohm.cm

9.4 W/m-K

Thermal Conductivity	65 Btu-in./ft. <sup>2</sup> hr°F
Annlicable Specifications	

**Electrical Resistivity** 

Wire & Bar AMS 5759, AMS 5796, ASTM F90, ISO 5832-5, NACE MR0175 (ISO 15156-3).

34.9 μ ohm.in

Typical Mechanical Properties – Spring Applications							
Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions				
Annealed	2155°F (1180°C)	130 – 180 ksi (896 – 1240 MPa)	-330°F to 1200°F (-200°C to 650°C)				
Spring Temper		220 – 280 ksi (1517 – 1930 MPa)	-300°F to 1200°F (-200°C to 650°C)				

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