



Alloy L605

UNS N06625 / AMS 5599 / AMS 5666



Udimet Alloy® L605 (AMS 5537, AMS 5759) is a cobalt-chromium-tungsten-nickel alloy. It has good formability, high strength to 1500°F (816°C), and good oxidation resistance up to 1800°F (980°C). This material also has good sulfidation resistance and is well known for resistance to wear and galling. Alloy L605 is used in applications requiring moderate strength and good oxidation resistance at high temperatures. L605 is non-magnetic, and the high chromium content provides resistance to corrosion in a wide range of environments such as marine, hydrochloric and nitric acids, and wet chlorine.

Call 1.888.282.3292 or visit our product page to request a quote on L605

L605 Chemical Composition

Element		Min	Max
Co	Cobalt	-	Balance
Cr	Chromium	-	20.00
W	Tungsten	-	15.00
Ni	Nickel	-	10.0
Fe	Iron	-	3.00
Mn	Manganese	-	1.50
Si	Silicon	-	0.40
C	Carbon	-	0.1
S	Sulfur	-	0.030
P	Phosphorous	-	0.040

Products and sizes

- Coil 0.032" - 0.065"
- Sheet 0.032" - 0.065"
- Bar 0.250" - 4.000"
- Precision Reroll Strip 0.0008" - 0.015"

Other industry standards:

- B50TF26
- PWA-LCS
- GE Aircraft Engine (GT193)
- GE Aviation S-SPEC-35
- AeDMS S-400
- RR SABRe Edition 2
- DFARS Compliant

Industry Applications

- Aircraft engine combustor liners
- Jet engine and aerospace components
- Land based gas turbine combustor liners
- Industrial furnace lines
- Mufflers and liners for high temperature kilns
- High temperature ball bearings
- Marine turbines

Physical Properties

- Density: 0.330 lb/in³ (9.14 g/cm³)
- Melting Range: 2375-2425 °F (1300-1330 °C)
- Specific Heat: 0.097 at 70 °F, Bru/lb °F (405 at 21 °C, J/kg °C)
- Permeability: 1.0007 at 200 oersteds
- Coefficient of Expansion: 6.6 0-200 °F, 10⁻⁶ in/in °F
- Thermal Conductivity: 84 Btu in/ft² h °F W/wm °C
- Electrical Resistivity: 613 ohm circ mil/ft (102.0 microhm-cm)

Mechanical Properties

Mechanical Properties and Yield Strength of Alloy L605

Ultimate Tensile Min		Yield Strength Min (0.2% OS)		Elongation in 4D %
ksi	MPa	ksi	MPa	
125	862	45	310	30

Rupture Strength for Alloy L605

Temperature		Rupture Strength	
°F	°C	ksi	MPa
1200	649	39	270
1300	704	32	220
1400	760	24	165
1500	816	17	120
1600	871	10	72
1700	927	6	44
1800	982	4	25