

L605 is a cobalt-chromium-tungsten-nickel alloy. L605 displays excellent high-temperature strength and excellent oxidation resistance to 2000°F. The alloy also has good sulfidation resistance and good resistance to wear and galling.

Specifications **AMS:** 5537, 5759
 UNS: R30605

Chemical Composition, %

	Co	Cr	W	Ni	Fe	Mn	Si	C	S	P
	Bal	20.00	15.00	10.00	3.00	1.5	.40	.10	.030	.040
					MAX		MAX		MAX	MAX

Features

- Good fabricability
- High strength
- Resistant to sulfidation, wear and galling

Applications

- Aircraft Engine Components
- Combustion Liners
- Industrial Furnace Muffles
- Valves
- Afterburner Rings
- Turbine Blades
- Springs
- Bearings

Mechanical Properties

Temperature			
°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

Physical Properties

- Density 0.335 lb/in³ 9.27 g/cm³
- Melting Range 2426-2570 °F 1300-1410 °C
- Specific Heat 0.092 at 70 °F, Btu/lb °F 385 at 21 °C, J/kg °C
- Permeability 1.002 at 200 oersted
- Thermal conductivity 65 Btu•in/ft²•h•°F 9.4 W/wm•°C
- Electrical Resistivity 533.2 (75°F) ohm•circ mil/ft 0.886 (24°C) microhm-m