



**Alloy X 40 Plate, Sheet, Pipe, Bar**

ALLOY X-40, a Cobalt-chromium-nickel-tungsten, ALLOY X-40 is usually used in the form of investment castings. ALLOY X-40 has very good high-temperature endurance properties, and its modulus of elasticity does not drop off as rapidly at elevated temperatures as it does for many other alloys.

ALLOY X-40 Nominal Composition (wt %)

Alloy	Co	Cr	W	Mo	Ni	C
X 40	54	25	8	-	10	0.5

ALLOY X-40 Wrought Alloys Rupture Stress (Mpa)

Alloy	815°C		870°C		980°C		1095°C	
	100h	1000h	100h	1000h	100h	1000h	100h	1000h
X 40	179	138	134	103	76	55	-	-

**General material properties of ALLOY X-40:**

ALLOY X-40 is a powder metallurgical cobalt based super alloy with substantial amounts of chromium, nickel and tungsten. ALLOY X-40 has outstanding corrosion and oxidation resistance. When heated it forms a very adherent oxide layer that resists wear and scaling. ALLOY X-40 is also very resistant to thermal fatigue.

**ALLOY X-40 machining characteristics:**

ALLOY X-40 is relatively soft and can therefore be machined at relatively high speeds. However, ALLOY X-40 does work harden, generates build-up along cutting edges, and produces long, stringy chips. Sharper, more positive cutting edges, typically reduce these phenomenons, and are therefore preferred. PVD (physical vapor deposition) coated micrograin tools are commonly employed, although at higher speeds CVD (chemical vapor deposition) coatings produce greater tool life.

Katalor are in Shanghai Pudong which only half an hours from airport to our office, and we have many stocks of Alloy X-40, contact Katalor to know more about ALLOY X-40 steel.