

IABCO Cobalt Alloy 6

Cobalt base bare rod

Product name	IABCO Cobalt Alloy 6		
Classification EN ISO	14700:	RCo2.	
Material No.	R30006		
Classification AWS	AWS A5.21:	ERCoCr-A	
Applications	<p>Cobalt alloy 1 is a bare cast rod used for hardfacing applications – TIG or gas welding. The alloy is used for applications requiring good abrasion, erosion, cavitation or metal-to-metal wear at temperatures up to 800°C. The weld deposit also has good resistance to corrosive media at high temperature, and also good impact resistance.</p> <p>Typical applications include valve seats, hot shear blades, pump components, punches and hot steel handling equipment.</p> <p>Build-up is normally restricted to two layers. Final finishing can be carried out by grinding or machining using carbide tools.</p>		
Base materials	<p>Matches cobalt alloy UNS R30006.</p> <p>For hardfacing applications on a wide range of mild, low alloy, engineering, construction and wear resisting steels.</p>		
Typical analysis of wire, weight %	C: 1.1 Mn: 0.5 W: 4.0 Ni: 1.5	Si: 1.1 Cr: 28.0 Fe: 1.5 Co: Balance	
Typical procedure ⁽¹⁾	<p>Welding procedure, particularly preheat, will be primarily dependent on the base material being hardfaced.</p> <p>Slow cooling and preheating procedures will be required to minimise the risk of cracking the hardfaced deposit.</p> <p>High heat inputs will tend to produce lower hardness; lower dilution will tend to produce higher hardness.</p>		
Hardness of deposit ⁽²⁾	Temperature	HV	HRC
	+20°C	600	48-58
	+400°C	475	47
	+600°C	400	40
	+800°C	200	-
Other products	-		

Notes (1) Application codes and project specifications should always be referred to for specific requirements.

(2) Actual mechanical properties will be dependent on specific welding procedure (including shielding gas, flux, PWHT etc) and should always be confirmed by approval of an appropriate welding procedure.