TIG CO12

Classification

AWS A5.21 : ERCoCr-B
DIN 8555 : WSG-20-GZ-50-CSTZ
EN 14700 : S Co2

Description & Applications

Cobalt base solid rod for TIG or oxyfuel harfacing of Stellite™ Grade 12*. Very good resistance to metal and mineral abrasion combined with corrosion and high temperature up to 800°C, in the presence or not of moderate shocks. Highly resistant to erosion and cavitation. Highly recommended when an important hardness is searched and for a deposit stressed by temperature, corrosion, abrasion and impact.

Main applications: Hardfacing of tools for processing plastics, for wood and paper (carton and paper cutting) characteristics, pressing tools, hot cut tools, hot shear blades, extrusion screws.

* Trademark Kennametal

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Fe	W	P	S	A/T	Co
Min	1.2		0.1	26				7.0				
Max	1.7	2.0	1.0	32	3.0	1.0	3.0	9.5	0.03	0.03	0.50	Rem.
Type	1.4	1.4	0.30	30.5	2.4	0.20	2.0	8.4	0.02	0.01	<0.50	Rem.

All Weld Metal Mechanical Properties

	Hardness (HRC)		
Temperature (°C)	+20°C	400°C	600°C
Type	47-50	~37	~34

Welding Current & Instructions

Welding mode	Shielding Gas
TIG = -	ISO 14175 : I1 (Ar) 6-12 L/min

Preheat massive parts or special steels to 300-600°C. Keep this temperature during welding and cool down slowly, preferable in an oven, to reduce the risk of cracking while cooling.

For oxyfuel hardfacing, use a reducing flame (slight excess of acetylene).