

Technical Data Sheet

STELLOY 12-G



Cobalt based alloy -> Metal cored wire for Gas Metal Arc Welding (GMAW)

1 GENERAL INFORMATION

EN 14700: T Co2
AWS A5.21: ERCCoCr-B

- Chromium and tungsten carbides deposit in an austenitic matrix
- Exceptional resistance to metal-to-metal wear in corrosive media at high temperatures, to erosion and to thermal shocks
- Used for hardfacing parts exposed to the single or combined effects of metal-to-metal wear, abrasion, impact, temperatures ranging from RT to 800°C, and corrosive environments



Saw teeth, cams, shafts, tappets and push rods for engines, screw conveyors and augers for rubber and plastics, seats and valves for oil and gas, etc.

Abrasion	████████	████████	████████	████████	████████
Impact	████████	████████	████████	████████	████████
Metal-metal	████████	████████	████████	████████	████████
Corrosion	████████	████████	████████	████████	████████
Temperature	████████	████████	████████	████████	████████

2 ALL WELD METAL PROPERTIES

CHEMICAL ANALYSIS [%]

C	Mn	Si	Cr	Fe	Co	W
1.5	1.0	1.0	30.0	3.5	Bal.	7.5

HARDNESS

44-48 HRC (as welded, three-layers)

Pulsed current favors high deposition rates and low dilution
High heat inputs result in lower hardness
50 HRC can be reached in first layer by minimising dilution (1.2 mm at 16 V)

3 RECOMMENDED WELDING PARAMETERS

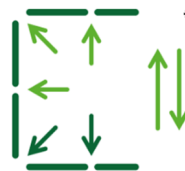
Diameter [mm]	Welding Position	Polarity	Current [A]	Voltage [V]	Stick-out [mm]
1.2	PA / 1G or 1F	DC+	150 - 250	26 - 30	25 ± 5
1.6	PA / 1G or 1F	DC+	200 - 300	26 - 30	25 ± 5
2.0	PA / 1G or 1F	DC+	250 - 350	26 - 30	25 ± 5
2.4	PA / 1G or 1F	DC+	300 - 400	26 - 30	25 ± 5

WELDING PROTECTION

Shielding gas (EN ISO 14175)

- I1 (100% Ar)

WELDING POSITION



*Out of position welding also possible using short circuit or pulsed arc modes of transfer



[Video Link](#)

4 PACKAGING OPTIONS

Diameter [mm]	1.2 - 1.6	2.4	2.4
Standard packaging (EN ISO 544)	BS 300 spool	B 450 coil	Drum
Weight [kg]	15	25	Up to 330

Other packaging requirements: please consult us

Welding products and techniques evolve constantly. All descriptions, illustrations and properties given in this data sheet are subject to change without notice and can only be considered as suitable for general guidance. This document is intended to help the user make the correct choice of product. It is his responsibility to assess its suitability for his intended application.