

STOODITE® 6-S Submerged Arc Welding Wire

AWS Classification A5.21:2011 ERCCoCr-A

Stoodite 6-S is the submerged arc wire version of Stoodite 6 cobalt alloy that produces a medium hardness cobalt-chromium deposit for high temperature applications with good abrasive wear and good impact resistance. Stoodite 6 is the most versatile and widely used cobalt alloy. Chromium carbides contained in the deposit provide excellent resistance to many forms of chemical and mechanical degradation, including galling and cavitation erosion. It bonds well with all weldable steels, including stainless.

TYPICAL MECHANICAL PROPERTIES

Abrasion Resistance	Excellent
Impact Resistance	Good
Corrosion Resistance	Good
Hardness (2 layers)	HRC 35 - 40
Hot Hardness	Excellent
Magnetic	No
Deposit Layers	2 Maximum
Surface Cross Check	No*
Machinability	Use carbide tools

* With proper preheat and slow cooling.

TYPICAL ALL WELD METAL COMPOSITION (WT%)

Carbon	1.2
Chromium	31.4
Iron	3.5
Manganese	0.9
Molybdenum	0.1
Nickel	2.2
Silicon	0.5
Tungsten	4.5
Cobalt	Balance

NOTE:

Chemical composition values are typical and were developed in accordance with AWS A5.21 procedures. Actual test results may vary depending on welding parameters, degree of dilution and base metal composition.

TYPICAL APPLICATIONS

- Flights of extrusion screws
- Sinkers roll bushings in steel mill
- Soaking pit tong bits
- Shafts

OPERATIONAL CHARACTERISTICS/WELDING PARAMETERS (DCEP)

3/32" (2.4 mm)	
Current DCEP, amp	250 – 450
Voltage (volts)	25 – 33
Flux	R-20
Shielding Gas	None
Wire Extension, in (mm)	1 1/4" (32)
Position	Flat

Note: Minimum preheat recommended is 400°F (204°C). Required preheat will depend on base material composition and component dimensions.

STANDARD SIZES & PACKAGING

Diameter	Packaging	Part #
3/32" (2.4 mm)	3 lb (1.36 kg) Spool	11904000
3/32" (2.4 mm)	50 lb (22.68 kg) Coil	810602184094

PDS-CO-W-004
Revision 6
October 16, 2015

NOTICE - Failure to follow manufacturer's directions for use may result in equipment or material failure and void any applicable warranty. The data provided or referenced herein is provided for informational purposes only, without guarantee or warranty and represents "typical" results when Stoodite products are used in accordance with internal Stoodite procedures. Other tests and procedures may produce differing results. Stoodite expressly disclaims any liability resulting from reliance on this data.

PROTECT YOURSELF AND OTHERS - Users should read and follow all recommended guidance on health and safety from their employer, the supplier, the manufacturer, and government authorities. These, at a minimum including the Warning Labels on the products and the Safety Data Sheets ("SDS"). The SDS and additional safety information may be found on materials or links at: Stoodite.com.