

STOODITE® 12-M

Gas Metal Arc Welding Wire

AWS Classification A5.21:2011 ERCCoCr-B

Stoodite 12-M is the tubular fabricated wire version of a cobalt alloy that produces a high hardness cobalt-chromium deposit for high temperature applications with good abrasive wear associated with corrosion. Chromium carbides contained in the deposit provide excellent resistance to many forms of chemical and mechanical degradation, including galling. 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 44 - 45
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	1.4
Chromium	27.3
Iron	3.9
Manganese	0.9
Molybdenum	0.1
Nickel	0.2
Silicon	1.1
Tungsten	8.3
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

- Valve and pump parts
- Chain saw bars and saw teeth
- Aircraft turbine blades
- Cutter rolls and bar mill twist rolls

OPERATIONAL CHARACTERISTICS/WELDING PARAMETERS (DCEP)

0.045" (1.2 mm)	
Current DCEP, amp	180 – 200
Voltage (volts)	25 – 27
Shielding Gas	Argon
Wire Extension, in (mm)	1/2" - 5/8" (12 - 16)
Position	Flat
1/16" (1.6 mm)	
Current DCEP, amp	280 – 300
Voltage (volts)	26 – 28
Shielding Gas	Argon
Wire Extension, in (mm)	5/8" - 3/4" (12 - 16)
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 #
0.045" (1.2 mm)	3 lb (1.36 kg) Spool	11983100
0.045" (1.2 mm)	25 lb (11.3 kg) Spool	11927400
1/16" (1.6 mm)	3 lb (1.36 kg) Spool	11903800
1/16" (1.6 mm)	25 lb (11.3 kg) Spool	811222182062

Note: Level layer wound.

PDS-CO-W-006
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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 Stoodly products are used in accordance with internal Stoodly procedures. Other tests and procedures may produce differing results. Stoodly expressly disclaims any liability resulting from reliance on this data.

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