

STOODITE® 1

Shielded Metal Arc Welding Electrode

AWS Classification A5.13/A5.13M:2010 ECoCr-C

Stoodite 1 is the highest hardness standard Stoodite alloy in the group of cobalt alloys used for elevated temperature abrasive wear associated with corrosion. Deposits of this alloy have a large volume of chromium carbides that impart outstanding abrasive wear resistance. The addition of tungsten enhances high temperature hardness and matrix toughness for excellent adhesive and solid particle erosion wear resistance. It bonds well with all steels, including stainless.

TYPICAL MECHANICAL PROPERTIES

Abrasion Resistance	Excellent
Impact Resistance	Fair
Corrosion Resistance	Good
Hardness (2 layer), HRC	46 – 50
Hot Hardness	Excellent
Magnetic	No
Deposit Layers	2 Maximum
Surface Cross Check	Some cracking possible
Machinability	Use carbide tools/grind

TYPICAL DEPOSIT CHEMISTRY (WT%)

Carbon	2.1
Chromium	29.6
Iron	3.3
Manganese	0.1
Molybdenum	0.1
Nickel	1.6
Silicon	0.9
Tungsten	12.1
Cobalt	Balance

TYPICAL APPLICATIONS

- Mixer seals and rotors
- Chemical valve balls and seats
- Cement handling systems
- Oil drilling tools
- Paper-pulp components
- Extrusion screws
- Steel mill components

OPERATIONAL CHARACTERISTICS/WELDING PARAMETERS (DCEP)

1/8" (3.2 mm)	
Current, amp	90 – 120
Position	Flat
5/32" (4.0 mm)	
Current, amp	135 – 160
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 #
1/8" (3.2 mm)	10 lb (4.5 kg) Vacuum Pak	10240700
5/32" (4.0 mm)	10 lb (4.5 kg) Vacuum Pak	10241100

PDS-CO-E-001
Revision 4
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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 Stoodie products are used in accordance with internal Stoodie procedures. Other tests and procedures may produce differing results. Stoodie 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: Stoodie.com.