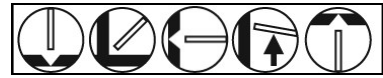


312 Sterling[®] AP



AWS A5.4: E312-16

WELDING POSITIONS:



FEATURES:

- Spray-like arc transfer
- Electrode doesn't overheat
- Directional arc
- Easy strike and re-strike
- All-position

- Easy slag release

BENEFITS:

- Low spatter and less clean-up
- Less stub loss, cost-effective
- Metal goes where directed
- Easy to use, less chance of starting defects
- Welds extremely well in flat, horizontal, vertical (up) and overhead positions
- Less chance of slag inclusions

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) or AC

RECOMMENDED WELDING PROCEDURES:

- ARC LENGTH:** Short (less than 1/2 the diameter of the electrode)
- FLAT & HORIZONTAL:** Angle electrode 10-15° from 90°
- VERTICAL-UP:** Use weaving techniques. Reduced amperage compared to flat position setting
- VERTICAL-DOWN:** Not recommended
- OVERHEAD:** Use slight weaving motion within the puddle

STORAGE: AC-DC electrodes have a high degree of moisture resistance; however, for critical applications, the electrodes should be held at 215°F - 300°F after opening.

RECONDITIONING: If exposed to atmosphere for extended periods, recondition at 660°F for 2 hours.

TYPICAL WELD METAL PROPERTIES* (Chem Pad):

Weld Metal Analysis (%)		AWS Spec
Carbon (C)	0.10	0.15 max
Manganese (Mn)	0.80	0.5 to 2.5
Phosphorus (P)	0.020	0.04 max
Sulphur (S)	0.020	0.03 max
Silicon (Si)	0.93	1.00 max
Copper (Cu)	0.15	0.75 max
Chromium (Cr)	29.00	28.0 to 32.0
Nickel (Ni)	9.00	8.0 to 10.5
Molybdenum (Mo)	0.11	0.75 max

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests		AWS Spec
Tensile Strength	115,000 psi (759 MPa)	95,000 psi
Yield Strength	85,500 psi (590 MPa)	Not required
Elongation % in 2" (50 mm)	25%	22%
DeLong Ferrite Number Range	25-80	Not required
Schaeffler Number Range	25-80	Not required
WRC Number Range (1992)	25-80	Not required

Note: Nitrogen (N) assumed to be 0.06% for calculation purposes.

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.4 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers LLC.

312 Sterling[®] AP

Diameter		Weld Position	Type of Current	Amperage Range	
Inches	(mm)			Min.	Max.
3/32	(2.5)	Flat & Horizontal	DCEP or AC	40	80
1/8	(3.2)	Flat & Horizontal	DCEP or AC	80	120
5/32	(4.0)	Flat & Horizontal	DCEP or AC	100	160

- Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		5-Lb. Can	6-Lb. Can	7-Lb. Can
Inches	(mm)	Inches	(mm)			
3/32	(2.5)	12	(300)	S480631-036	—	—
1/8	(3.2)	14	(350)	—	S480644-032	—
5/32	(4.0)	14	(350)	—	S480651-032	—

CONFORMANCES AND APPROVALS:

- AWS A5.4, Class E312-16
- ASME SFA 5.4

TECHNICAL QUESTIONS? For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at Applications.Engineering@hobartbrothers.com

CAUTION:

Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 8669 NW 36th St., Miami, FL 33166 (can also be downloaded online at www.aws.org); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers LLC product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

Because Hobart Brothers LLC is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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Revision Date: 180514 (Replaces 170818)

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