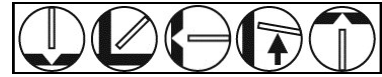


# Hobart® 447A



AWS E6013 (E4313\*)

## WELDING POSITIONS:



## FEATURES:

- Excellent arc stability
- Fast-freeze
- All position
- Slag removes easily

## BENEFITS:

- Welding accuracy and efficiency
- Excellent for poor fit-up
- Welds in flat, horizontal, vertical and overhead positions
- Quick clean-up

## APPLICATIONS:

- General fabrication
- Machine parts
- Metal buildings
- Shaft build-up

**TYPE OF CURRENT:** AC, Direct Current Electrode Positive (DCEP), or Direct Current Electrode Negative (DCEN)

**ARC LENGTH:** Average length (1/8" to 1/4")

**FLAT:** Angle electrodes 10-15° from 90° with higher heat than E6011 electrodes

**VERTICAL-UP:** Reduce amperage from flat position

**VERTICAL-DOWN:** Use higher amperage and faster travel, staying ahead of puddle

**OVERHEAD:** Use slight whipping motion; multi-pass for build-up

**STORAGE:** 60° to 100°F, (20° to 40°C) and below 50% relative humidity or holding oven @ 100° to 120°F (38° to 49°C)

**RECONDITIONING:** 250° to 300°F, (121° to 149°C) for one hour @ temperature

## TYPICAL WELD METAL CHEMISTRY\* (Chem Pad):

| Weld Metal Analysis (%) |       | AWS Spec (max) |
|-------------------------|-------|----------------|
| Carbon (C)              | 0.08  | 0.20           |
| Manganese (Mn)          | 0.39  | 1.20           |
| Phosphorus (P)          | 0.012 | Not required   |
| Sulphur (S)             | 0.016 | Not required   |
| Silicon (Si)            | 0.25  | 1.00           |
| Nickel (Ni)             | 0.04  | 0.30           |
| Chromium (Cr)           | 0.04  | 0.20           |
| Molybdenum (Mo)         | 0.01  | 0.30           |
| Vanadium (V)            | 0.01  | 0.08           |

**Note:** AWS specification single values are maximums.

## TYPICAL MECHANICAL PROPERTIES\* (As Welded):

| Mechanical Tests           |                      | AWS Spec (min)       |
|----------------------------|----------------------|----------------------|
| Tensile Strength           | 74,000 psi (514 MPa) | 60,000 psi (414 MPa) |
| Yield Strength             | 67,000 psi (463 MPa) | 48,000 psi (331 MPa) |
| Elongation % in 2" (50 mm) | 30%                  | 17%                  |
| Reduction of Area          | 25% to 55%           | Not required         |

## TYPICAL CHARPY V-NOTCH IMPACT VALUES\* (As Welded):

Not applicable

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.1 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 Company.

# Hobart® 447A

| Diameter<br>Inches (mm) | Type of<br>Current | Minimum<br>Amps | Optimum<br>Amps | Maximum<br>Amps |
|-------------------------|--------------------|-----------------|-----------------|-----------------|
| 3/32 (2.4)              | AC, DCEN or DCEP   | 40              | 70              | 80              |
| 1/8 (3.2)               | AC, DCEN or DCEP   | 70              | 100             | 120             |
| 5/32 (4.0)              | AC, DCEN or DCEP   | 130             | 150             | 160             |
| 3/16 (4.8)              | AC, DCEN or DCEP   | 140             | 190             | 220             |

\*For out-of-position welding, reduce amperage shown by 15%.

| Diameter<br>Inches (mm) | Type of<br>Current | Amps | Volts     | Deposition<br>Rate<br>lbs/hr (kg/hr) | Deposition<br>Efficiency % |
|-------------------------|--------------------|------|-----------|--------------------------------------|----------------------------|
| 3/32 (2.4)              | AC, DCEN or DCEP   | 70   | 19-24     | 1.35 (0.6)                           | 63.7                       |
| 1/8 (3.2)               | AC, DCEN or DCEP   | 100  | 18.5-22.5 | 1.85 (0.8)                           | 66.1                       |
| 5/32 (4.0)              | AC, DCEN or DCEP   | 150  | 20-24     | 2.67 (1.2)                           | 61.6                       |
| 3/16 (4.8)              | AC, DCEN or DCEP   | 190  | 20-22.5   | 4.22 (1.9)                           | 62.7                       |

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

**STANDARD DIAMETERS AND PACKAGES:** For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543, or (937) 332-5188 for International Customer Service.

| Diameter<br>Inches (mm) | 5-lb. (2.3kg)<br>Plastic Pak | 10-lb. (4.5kg)<br>Plastic Pak | 50-lb. (22.7kg)<br>Carton |
|-------------------------|------------------------------|-------------------------------|---------------------------|
| 3/32 (2.4)              | S113832-045                  | S113832-089                   | S113832-031               |
| 1/8 (3.2)               | S113844-045                  | S113844-089                   | S113844-031               |
| 5/32 (4.0)              | S113851-045                  | S113851-089                   | S113851-031               |
| 3/16 (4.8)              | —                            | —                             | S113858-031               |

## CONFORMANCES AND APPROVALS:

- **AWS A5.1, E6013**
- **ASME SFA 5.1, F-2, A-1**
- **ABS, E6013**

## 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, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

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

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