

AWS E6013 (E4313*)

Hobart® 447A**DESCRIPTION:**

The fast-freeze characteristics of **Hobart 447A** makes it the perfect choice for welding applications that have poor fit-up conditions. It produces a very stable arc with good weld bead appearance. Excellent choice for sheet metal welding.

APPLICATIONS:

General purpose fabrication, machine parts, metal buildings and structures, shaft build-up.

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 position
- Quick clean-up

TYPICAL WELD METAL PROPERTIES(Chem Pad):**

Weld Metal Analysis		AWS Spec (max)
Carbon (C)	0.10	not required
Manganese (Mn)	0.28	not required
Phosphorus (P)	0.012	not required
Sulphur (S)	0.016	not required
Silicon (Si)	0.27	not required

TYPICAL MECHANICAL PROPERTIES(AW):**

		AWS Spec (min)
Tensile Strength	72,600 psi (501 MPa)	60,000 psi
Yield Strength	61,300 psi (423 MPa)	48,000 psi
Elongation % in 2"	26.5%	17%
Reduction of Area	25% to 55%	not required

TYPICAL CHARPY-V-NOTCH IMPACT VALUES* (AW):

Not applicable

CONFORMANCES AND APPROVALS:

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

* Metric AWS classification

*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 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.



RECOMMENDED WELDING PROCEDURES:

GENERAL:	AC; electrode negative, work positive (DCEN); or electrode positive, work negative (DCEP)
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°F 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°F to 300°F, (121° to 149°C) for one hour @ temperature

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
Inches	mm				
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%.

TYPICAL DEPOSITION DATA (at optimum):

Diameter		Type of Power	Amps	Volts	Deposition Rate lbs/hr	Deposition Efficiency*%
Inches	mm					
3/32	2.4	AC	70	19-24	1.35	63.7
1/8	3.2	AC	100	18.5-22.5	1.85	66.1
5/32	4.0	AC	150	20-24	2.67	61.6
3/16	4.8	AC	220	20-22.5	4.22	62.7

*Allowance made for 2" stub loss included.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		5-lb. Plastic Pak	10-lb Plastic Pak	50-Lb. Carton
Inches	mm	Inches	mm			
3/32	2.4	14"	355	S113832-045	S113832-089	S113832-031
1/8	3.2	14"	355	S113844-045	S113844-089	S113844-031
5/32	4.0	14"	355	S113851-045	S113851-089	S113851-031
3/16	4.8	14"	355	—	—	S113858-031

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

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