



**Certificate of Conformance
to Requirements for Welding Electrode**

Hobart

Product Type: 309/309L Sterling AP
 Classification: E309/309L-16
 Specifications: AWS A5.4./ASME SFA 5.4
 Diameter Tested:
 Date Tested: 12/28/2015
 Date Generated: 7/22/2016

This is to certify that the product named above and supplied on the referenced order number is of the same classification, manufacturing process, and material requirements as the material which was used for the test that was concluded on the date shown, the results of which are shown below. All tests required by the specifications shown for classification were performed at that time and the material tested met all requirements. It was manufactured and supplied by the Quality System Program of Hobart Brothers, which meets the requirements of ISO9000, ANSI/AWS A5.01, and other specification and Military requirements, as applicable.

Test Settings

Amps	Volts	Size	Polarity	Preheat	Interpass	Travel Speed
120	25	1/8X14 in	AC	rmt F (C)	300 F (149 C)	+ - 1 in/min
105	25	1/8X14 in	DCEP	rmt F (C)	300 F (149 C)	+ - 1 in/min
180	25	3/16X14 in	AC	rmt F (C)	300 F (149 C)	+ - 1 in/min
160	26	3/16X14 in	DCEP	rmt F (C)	300 F (149 C)	+ - 1 in/min
150	25	5/32X14 in	AC	250 F (121 C)	250 F (121 C)	+ - 1 in/min
150	25	5/32X14 in	DCEP	250 F (121 C)	250 F (121 C)	+ - 1 in/min

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength	Yield Strength	Elong.% in 2"
1/8X14 in / AC	PC7692	As Welded	83,000 psi (570 Mpa)	64,000 psi (439 Mpa)	42
1/8X14 in / DCEP	PC7693	As Welded	84,000 psi (579 Mpa)	66,000 psi (452 Mpa)	41
3/16X14 in / AC	PC7694	As Welded	81,000 psi (559 Mpa)	63,000 psi (435 Mpa)	41
3/16X14 in / DCEP	pc7695	As Welded	82,000 psi (562 Mpa)	64,000 psi (441 Mpa)	41
5/32X14 in / AC	PD0233	As Welded	84,000 psi (578 Mpa)	66,000 psi (456 Mpa)	37
5/32X14 in / DCEP	PD0234	As Welded	83,000 psi (570 Mpa)	65,000 psi (451 Mpa)	37

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
1/8X14 in / AC	PC7692	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/8X14 in / DCEP	PC7693	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
3/16X14 in / AC	PC7694	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
3/16X14 in / DCEP	PC7695	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / AC	PD0233	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEP	PD0234	Conforms	Horizontal :	Overhead :	Vertical :	Conforms

Chemical Analysis

Size / Polarity / Ref. No.	C	Mn	P	S	Si	Cu	Cr	V	Ni	Mo	Al	Ti	Nb	Co	B	W	Sn	Fe	Sb	N	Mg	Zn	Be
1/8X14 in / AC / PC7692	0.038	1.288	0.037	0.008	0.719	0.094	22.347		12.988	0.254													
1/8X14 in / DCEP / PC7693	0.037	1.220	0.037	0.008	0.685	0.125	21.793		12.464	0.256													
3/16X14 in / AC / PC7694	0.038	1.258	0.033	0.010	0.611	0.100	22.298		11.583	0.225													
3/16X14 in / DCEP / PC7695	0.042	1.244	0.034	0.009	0.656	0.098	21.990		12.093	0.251													
5/32X14 in / AC / PD0233	0.030	1.237	0.034	0.007	0.698	0.089	22.503		12.177	0.250													
5/32X14 in / DCEP / PD0234	0.034	1.250	0.037	0.007	0.668	0.105	22.133		12.179	0.254													

Dave A. Thomas

Dave Thomas , Quality Assurance Rep.

The information Certification and Limited Warranty - Data for the above supplied product are those obtained when welded and tested in accordance with the above specification. All tests for the above classification were satisfied. Other tests and procedures may produce different results. Hobart Brothers produces welding consumables under continuing quality assurance programs audited and approved by the American Bureau of Shipping ("ABS").