HOBART FILLER METALS

Certificate of Conformance to Requirements for Welding Electrode

Product Type:	**HOBALLOY 8018C1**
Classification:	**E8018-C1 H4**
Specifications:	**AWS A5.5/A5.5M; ASME SFA 5.5**
Diameter Tested:	**1/8"-5/32"**
Date Tested:	**7/24/2026**
Date Generated:	**9/15/2026**

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 ISO 9001, ANSI/AWS A5.01, and other specification and Military requirements, as applicable. This document supplies actual test results of non-specific inspection in conformance with the requirements of EN 10204, type 2.2 certification.

MADE IN THE U.S. OF U.S. AND IMPORTED MATERIALS.

Test Settings

Size	Polarity	Amps	Volts	Preheat F(C)	Interpass F(C)
1/8X14 in	DCEP	140	26 - 23 1/2	225 (107)	225 (107)
5/32X14 in	DCEP	185	26 - 24	225 (107)	225 (107)

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength psi(MPa)	Yield Strength psi(MPa)	Elong.% in 2"
1/8X14 in / DCEP	PF3077	SR 1 Hr @ 1125F	88,000 (610)	74,000 (512)	**27**
5/32X14 in / DCEP	PF3101	SR 1 Hr @ 1125F	89,000 (615)	77,000 (529)	**27**

Mechanical Properties - Impact

Size / Polarity	Ref. No.	Testing Conditions	Test Temp. F(C)	Individuals ft.lb.(J)	Average ft.lb.(J)	Type
1/8X14 in / DCEP	PF3077	SR 1 Hr @ 1125F	-75 F (-59 C)	93,90,92 (126,122,125)	92 (124)	Charpy-V-Notch
5/32X14 in / DCEP	PF3101	SR 1 Hr @ 1125F	-75 F (-59 C)	64,60,64 (87,81,87)	63 (85)	Charpy-V-Notch

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test					
1/8X14 in / DCEP	PF3077	Conforms	Horizontal :		Overhead :	Conforms	Vertical :	Conforms
5/32X14 in / DCEP	PF3101	Conforms	Horizontal :		Overhead :	Conforms	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	Sb	As
1/8X14 in / DCEP / CF21523	0.04	0.90	0.02	0.01	0.24				2.23																
5/32X14 in / DCEP / PF1923	0.04	1.16	0.01	0.01	0.48				2.17																
1/8X14 in / AC / PF3083	0.04	0.97	0.01	0.01	0.39				2.00																
5/32X14 in / DCEP / PF3101	0.04	1.10	0.01	0.01	0.49				2.20																

1/8X14 in / CF21523	Total H2O Method : Train - As Received	Total Coating Moisture : 0.15504
5/32X14 in / PF1923	Total H2O Method : Train - 9 Hour	Total Coating Moisture : 0.34687
1/8X14 in / PF3083	Total H2O Method : Train - 9 Hour	Total Coating Moisture : 0.32223
5/32X14 in / PF3101	Total H2O Method : Train - As Received	Total Coating Moisture : 0.11595

Size / Polarity	Ref. No.	Diffusible Hydrogen Collected per AWS A4.3
5/32X14 in / DCEP	HB8929	**3 ml/100g of weld metal for 5/32X14 in diameter 13% relative humidity**
1/8X14 in / DCEP	HB9399	**4 ml/100g of weld metal for 1/8X14 in diameter 36% relative humidity**

James A. Owens, Q.A. Specialist ,

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.