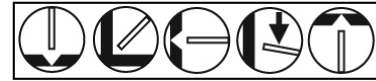


Fabshield® 81N1+™



AWS A5.29: E71T8-Ni1J H8

WELDING POSITIONS:



FEATURES:

- Excellent operator appeal
- Fast-freezing slag
- Easy slag removal
- High impact strengths at low temperatures
- No shielding gas required
- Smaller diameter T8 electrode

BENEFITS:

- Increases productivity
- Suitable for all-position welding
- Reduces clean-up time, increases productivity
- Resists cracking in severe applications
- Suitable for welding outdoors
- Easier welding and training

APPLICATIONS:

- API 5L Grades X70 and below
- API 5L oil and gas transmission pipelines
- Distribution pipeline

SLAG SYSTEM: Fast freezing, basic type, flux-cored wire

SHIELDING GAS: None required

TYPE OF CURRENT: Direct Current Electrode Negative (DCEN)

STANDARD DIAMETERS: 1/16" (1.6mm), 5/64" (2.0mm)

RE-DRYING: Not recommended

STORAGE: Product should be stored in a dry, enclosed environment, and in its original intact packaging

TYPICAL WELD METAL PROPERTIES* (Chem Pad):

Weld Metal Analysis	Fabshield 81N1+	AWS Spec
Carbon (C)	0.02	0.12
Manganese (Mn)	1.44	1.50
Silicon (Si)	0.06	0.80
Sulphur (S)	0.004	0.03
Phosphorus (P)	0.010	0.03
Aluminum (Al)	1.00	1.80
Nickel (Ni)	0.95	0.80-1.10

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	Fabshield 81N1+	AWS Spec
(GAS CHROMATOGRAPHY)	5.5ml/100g	8.0ml/100g Maximum

TYPICAL MECHANICAL PROPERTIES* [Aged 48 hrs @ 200°F (93°C)]:

Mechanical Tests	1/16" (1.6mm) Diameter	5/64" (2.0mm) Diameter	AWS Spec
Tensile Strength	80,000 psi (552 MPa)	82,000 psi (565 MPa)	70,000-90,000 psi (490-620 MPa)
Yield Strength	71,000 psi (490 MPa)	71,000 psi (490 MPa)	58,000 psi (400 MPa) Minimum
Elongation % in 2" (50 mm)	29%	25%	20% Minimum

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (AS WELDED):

CVN Temperatures	1/16" (1.6mm) Diameter	5/64" (2.0mm) Diameter	AWS Spec
Avg. at -20°F (-30°C)	295 ft•lbs (400 Joules)	256 ft•lbs (347 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -40°F (-40°C)	141 ft•lbs (191 Joules)	135 ft•lbs (183 Joules)	20 ft•lbs (27 Joules) Minimum "J" requirements

*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 A5.29 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.

Fabshield[®] 81N1+[™]

Diameter		Weld Position	Amps	Volts	Wire-Feed Speed		Deposition Rate		Contact Tip to Work Distance	
Inches	(mm)				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
1/16	(1.6)	All Position	160	17	95	(2.4)	2.8	(1.3)	3/4	(19)
1/16	(1.6)	All Position	180	18	110	(2.8)	3.5	(1.6)	3/4	(19)
1/16	(1.6)	Flat, Horizontal	200	19	130	(3.3)	4.1	(1.9)	3/4	(19)
1/16	(1.6)	Flat, Horizontal	225	21	160	(4.1)	5.1	(2.3)	3/4	(19)
5/64	(2.0)	All Position	170	17	70	(1.8)	2.7	(1.2)	1	(25)
5/64	(2.0)	All Position	190	18	80	(2.0)	3.4	(1.5)	1	(25)
5/64	(2.0)	Flat, Horizontal	220	19	85	(2.2)	3.9	(1.7)	1	(25)
5/64	(2.0)	Flat, Horizontal	240	20	95	(2.4)	5.0	(2.3)	1	(25)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **All positions include:** Flat, Horizontal, Vertical Down, and Overhead

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		10-lb. (4.5kg)	14-lb. (6.4kg)
Inches	(mm)	Vacuum-Packed Spool	Coil
1/16	(1.6)	S228519-032	S228519-P01
5/64	(2.0)	—	S228525-P01

CONFORMANCES AND APPROVALS:

- AWS A5.29, E71T8-Ni1J H8, ASME SFA 5.29, E71T8-Ni1J
- AWS A5.29M, E491T8-Ni1J H8

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.

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

Fabshield is a trademark of Hobart Brothers Company, Troy, Ohio.

Revision Date: 110616 (Replaces 101202)
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