

AWS E81T8-Ni2 J
EN758-T 46 4 2Ni Y N 1 H10

Fabshield® 81N2

DESCRIPTION:

Fabshield 81N2 is a self-shielded all position, single and multi-pass tubular wire designed primarily for those applications requiring high impact toughness at low temperature ranges. Its excellent operator appeal and slag removal compliment this product's fast freezing slag making it an excellent choice for all position welding.

APPLICATIONS:

Fabshield 81N2 is designed specially for single and multi-pass all position fillet, lap and deep groove butt welds used in storage, piping, transportation, offshore drilling rigs, ships, barges, construction, as well as other types of structural and general fabrication.

FEATURES:

- Good low temperature impacts
- Self-peel slag removal
- Fast-freezing slag
- Excellent operator appeal
- Outdoor welding

BENEFITS:

- Welds remain ductile at cold temperatures
- Less time spent grinding or chiseling weld beads
- All position welding
- Less fatigue to weld with
- No shielding gas required

SHIELDING GAS: None required

TYPE OF CURRENT: DCEN

TYPICAL WELD METAL PROPERTIES*(Tensile):

Weld Metal Analysis	
Carbon (C)	0.05
Manganese (Mn)	0.96
Silicon (Si)	0.06
Phosphorus (P)	0.013
Sulphur (S)	0.006
Nickel (Ni)	2.15
Aluminum (Al)	0.80

TYPICAL DIFFUSIBLE HYDROGEN*(Gas Chromatography): 7.0 ml/100 g

TYPICAL MECHANICAL PROPERTIES*(AW):

Tensile Strength	83,700 psi (577 MPa)
Yield Strength	71,400 psi (492 MPa)
Elongation % in 2"	28.5%
Reduction of Area	77.6%

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

Avg. at -40°F (-40°C)	135 ft•lbs (183 J)
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CONFORMANCES AND APPROVALS:

• AWS A5.29, E81T8-Ni2 J, ASME SFA5.29 • ABS 81T8-Ni2 J • EN758, T 46 4 2Ni Y N 1 H10

*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.

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WELDING DATA:

The information listed below was determined by welding performed with DCEN welding current.

Diameter		Weld Position	Amps	Volts	Wire Feed Speed in/min	Deposition Rate lbs/hr	Stickout ±1/4"
Inches	mm						
5/64	2.0	Overhead	180	18	65	3.0	1"
5/64	2.0	Flat/Horizontal	200	18	78	3.7	1"
5/64	2.0	Vertical-down	225	19	94	4.5	1"
5/64	2.0	Vertical-up	220	19	91	4.4	1"
5/64	2.0	Flat/Horizontal	250	20	110	5.3	1"
3/32	2.4	Flat/Horizontal	275	19.5	95	6.1	1"
3/32	2.4	Flat/Horizontal	300	20.0	105	6.7	1"
3/32	2.4	Flat/Horizontal	325	20.5	120	8.4	1"
3/32	2.4	Flat/Horizontal	375	22.0	155	10.8	1"
3/32	2.4	Flat Fillet	360	21.0	148	10.5	1"
3/32	2.4	Horizontal Fillet	350	21.0	140	10.4	1"
3/32	2.4	Overhead	225	18.0	67	3.9	1"
3/32	2.4	Vertical-down	200	18.5	50	3.5	1"
3/32	2.4	Vertical-up	250	20.0	87	4.8	1"

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.

NOTE:

Actual use of the product may produce varying results due to conditions and welding techniques over which ITW/Hobart Brothers has no control, including, but not limited to, plate chemistry, weldment design, fabrication methods, electrode size, welding procedure, service requirements and environment. The purchaser is solely responsible for determining the suitability of ITW/Hobart Brothers products for the purchaser's own use. Any prior representations shall not be binding. ITW/Hobart Brothers DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS.

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

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

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