Tube-Alloy® 865-S MOD

Features:

- Specially formulated modified stainless steel deposit.
- Provides high deposition rates with crack and porosity-free deposits.

Benefits

- Provides very good resistance to thermal fatigue fire cracking, as well as good resistance to metal-to-metal wear and corrosion. Very well suited for use on steel mill rolls.
- Allows for productive component build-up with a minimized risk of costly rework.

Applications:

- Continuous caster rolls

Wire Type: Composite (cored) submerged arc hardfacing wire
Recommended Flux: HF-N
Type of Current: Direct Current Electrode Positive (DCEP)
Standard Diameters: 1/8” (3.2 mm)
Re-Drying: Not Recommended
Storage: Product should be stored in a dry, enclosed environment and in its original intact packaging

Typical Weld Metal Chemical Composition* (Chem Pad):

With Flux	% C	% Mn	% Si	% Cr	% Ni	% Mo	% V	% Nb	% Fe
HF-N	0.18	1.10	0.40	13.50	2.30	1.00	0.15	0.15	Bal.

Relative Wear Resistance*:

Abrasion: Very Good
Impact: Good
Heat: Excellent

Typical Hardness* (As Deposited):

With Flux	Layer	Hardness As Deposited On AISI 1020 Steel
HF-N	1	45 Rc
HF-N	2	46 Rc
HF-N	3-8	48 Rc

Typical Hardness* (tempered):

With Flux	Hardness As Deposited	Time at Temperature	Hardness after Tempering at		
			510°C (950°F)	565°C (1050°F)	620°C (1150°F)
HF-N	48 Rc	6 hours	47 Rc	42 Rc	35 Rc
HF-N	—	10 hours	43 Rc	37 Rc	32 Rc
HF-N	—	20 hours	42 Rc	36 Rc	31 Rc

*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 the AWS A5 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 LLC.

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Typical Operating Parameters*:

Diameter		Optimum Amps	Volts	Nominal Travel Speed		Approximate Deposition Rate		Contact Tip to Work Distance	
Inches	(mm)			in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
1/8	(3.2)	400—450	26—28	14—18	(36—45)	7.3	(16.0)	1 1/4—1 1/2	(32-38)
1/8	(3.2)	450—500	27—30	14—18	(36—45)	9.1	(20.0)	1 1/4—1 1/2	(32-38)
1/8	(3.2)	500—550	39—32	14—18	(36—45)	10.9	(24.0)	1 1/4—1 1/2	(32-38)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of the steel being welded.**
- **See Above:** Parameters are provided for informational purposes only. All values are approximate. The optimal amperage, voltage, and travel speed may vary depending on the material thickness, joint design, and other variables specific to the application. Likewise, actual deposition rate may vary depending on contact tip to work distance used.

Deposit Characteristics:

Deposit Microstructure: Martensitic
Maximum Deposit Thickness: Unlimited
Machinability: Fair with carbide tools

Recommended Fluxes:

Flux Name	50-lb. (22.7 kg)
Net Pallet Weight	2000-lb. (907.2 kg)
HF-N	S669810-055

Available Diameters and Packages: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188

Diameter		600-lb. (272 kg) Auto-Pak
Inches	(mm)	
Net Pallet Weight		2400-lb. (X kg)
1/8	(3.2)	S614943-084

Technical Questions? For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at Applications.Engineering@HobartBrothers.com

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, 8669 NW 36 St, Miami, FL 33166-6672 (can also be downloaded online at www.aws.org); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers LLC 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.

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HOBART FILLER METALS