

# Tube-Alloy<sup>®</sup> 877-S



## FEATURES:

- Low-alloy steel deposit provides very good toughness
- Provides high deposition rates with crack and porosity-free deposits

## BENEFITS

- Suitable for build-up/buffer layers prior to the application of harder overlay deposits, and also for use in applications where both impact and abrasion will be encountered.
- Allows for productive component build-up with minimal risk of costly rework.

## APPLICATIONS:

- Continuous caster rolls
- Build-up/buffer layers prior to the application of two to three layers of harder Tube-Alloy overlay products.

**WIRE TYPE:** Composite (cored) submerged arc hardfacing wire

**RECOMMENDED FLUXES:** HF-N

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**STANDARD DIAMETERS:** 3/32" (2.4 mm), 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	% Fe
HF-N	0.10	1.00	0.60	1.00	1.30	0.4	0.12	Bal.

## RELATIVE WEAR RESISTANCE\*

**ABRASION:** Fair

**IMPACT:** Very Good

**HEAT:** Fair

## TYPICAL HARDNESS\* (AS DEPOSITED):

With Flux	Layer	Hardness As Deposited On AISI 1020 Steel
HF-N	1	22 Rc
HF-N	2	23 Rc
HF-N	3	24 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 A5.28 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 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	24 Rc	6 hours	24 Rc	25 Rc	22 Rc
HF-N	24 Rc	10 hours	25 Rc	26 Rc	21 Rc
HF-N	-	20 hours	25 Rc	26 Rc	21 Rc

## 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)
3/32	(2.4)	350-500	25-29	14-18	(36-46)	14-22	(6.4 -10)	1—1.25	(25-32)
1/8	(3.2)	400-550	26-30	14-18	(36-46)	16-24	(7.3-10.9)	1.25—1.5	(32-38)

### DEPOSIT CHARACTERISTICS:

**DEPOSIT MICROSTRUCTURE:** Low-carbon martensitic

**MAXIMUM DEPOSIT THICKNESS:** Unlimited

**MACHINABILITY:** Excellent

**CUTTING:** Cannot be oxy-fuel cut

**STRONGLY MAGNETIC**

- 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.

## 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)
Inches (mm)	Auto-Pak
Net Pallet Weight	2400-lb. (1089 kg)
3/32 (2.4)	S611929-084
1/8 (3.2)	S611943-084

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](mailto: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](http://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](http://www.hobartbrothers.com).

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Revision Date: 240305 (Replaces 240226)

