

HF-N



FEATURES:

- Non-alloying flux for hardfacing applications
- Agglomerated flux
- Self-peeling slag even at high currents and temperatures up to 850°F (450°C)

BENEFITS:

- Works well when the weld metal contains “difficult” elements such as Niobium and Vanadium
- Provides good welding characteristics with a wide range of cored hardfacing wires
- Minimizes cleanup time and the risk of inclusions (and associated rework).
- Allows for the use of productive hardfacing parameters

APPLICATIONS:

- Single and multi-pass welding of unlimited thickness
- Hardfacing Applications
- Crusher Rolls
- Steel Mill Roll Repair

FLUX TYPE: Agglomerated fluoride-basic

BASICITY INDEX: 2.6 (Boniszewski)

ALLOY TRANSFER: None
Typical AWS Wall Neutrality Number: 4 (Neutral)

DENSITY: ~1.2 kg/L

MESH SIZE: 0.2 - 2.0 mm / 10 - 70 mesh

CURRENT: Direct Current Electrode Positive (DCEP)

STORAGE: Product in undamaged packaging can be used without re-drying. Re-dried flux must be stored at 150±25°C (300±45°F) before use.

RE-DRYING: If the flux packaging has been opened and the flux has been exposed to moist conditions, re-drying is recommended. The flux should be re-dried at a temperature of 300-350°C (570-660°F) for a minimum of 2 hours. Re-drying should be made a maximum of three times.

RECYCLING: The flux recycling system must be free from moisture and oil. Slag and mill scale must be removed from the recycled flux. At least one part of new flux must be added to three parts of recycled flux.

TYPICAL FLUX COMPOSITION*:

SiO ₂	Al ₂ O ₃ + TiO ₂	MnO + FeO	CaO + MgO + CaF ₂
~9.9%	~18.2%	~0.3%	~71.5%

TYPICAL DEPOSIT COMPOSITION* (CHEM PAD):

With Wire	%C	%Si	%Mn	%Cr	%Ni	%Mo	%V	%Nb	%Fe
Tube-Alloy® 877-S	0.10	0.60	1.00	1.00	1.30	0.40	0.12		Balance
Tube-Alloy 887-S	0.12	0.60	1.00	12.50	2.50	1.50	0.20	0.15	Balance
Tube-Alloy 952-S	0.27	0.60	1.45	12.80	0.60	1.80	0.19	0.18	Balance
Tube-Alloy A250-S	0.19	0.50	1.00	12.30	-	-	-	-	Balance
Tube-Alloy A2JL-S	0.04	0.60	0.80	13.50	2.00	1.00	-	-	Balance
Tube-Alloy 242-S MOD	0.14	0.80	2.00	3.00	-	0.75	-	-	Balance
Tube-Alloy 865-S MOD	0.18	0.40	1.10	13.50	2.30	1.00	0.15	0.15	Balance

*The information contained or otherwise referenced herein is presented only as “typical” without guarantee or warranty, and Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with industry specifications. 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 DEPOSIT HARDNESS* (AS DEPOSITED):

With Wire	AISI 1020 Steel				AISI 1045 Steel		
	Layer 1	Layer 2	Layer 3+	Layers 4-8	Layer 1	Layer 2	Layer 3+
Tube-Alloy® 877-S	22 Rc	23 Rc	24 Rc	-	-	-	-
Tube-Alloy 887-S	32 Rc	38 Rc	44 Rc	-	-	-	-
Tube-Alloy 952-S	40 Rc	45 Rc	49 Rc	-	44 Rc	49 Rc	49 Rc
Tube-Alloy A250-S	44 Rc	46 Rc	48 Rc	-	46 Rc	50 Rc	50 Rc
Tube-Alloy A2JL-S	40 Rc	40 Rc	40 Rc	33 Rc			
Tube-Alloy 242-S MOD	29 Rc	38 Rc	39 Rc	-	44 Rc	45 Rc	40 Rc
Tube-Alloy 865-S MOD	45 Rc	46 Rc	48 Rc	-	-	-	-

TYPICAL DEPOSIT HARDNESS* (TEMPERED):

With Wire	Hardness As Deposited	Time @ Temperature	Hardness After Tempering @		
			510°C (950°F)	565°C (1050°F)	620°C (1150°F)
Tube-Alloy® 877-S	24 Rc	6 Hrs.	24 Rc	25 Rc	22 Rc
		10 Hrs.	25 Rc	26 Rc	21 Rc
		20 Hrs.	25 Rc	26 Rc	21 Rc
Tube-Alloy 887-S	44 Rc	8 Hrs.	44 Rc	41 Rc	35 Rc
Tube-Alloy 952-S	50 Rc	8 Hrs.	52 Rc	50 Rc	43 Rc
Tube-Alloy A250-S	50 Rc	3 Hrs.	34 Rc	-	-
		6 Hrs.	33 Rc	28 Rc	24 Rc
		10 Hrs.	32 Rc	28 Rc	23 Rc
		20 Hrs.	31 Rc	23 Rc	22 Rc
Tube-Alloy A2JL-S	35 Rc	6 Hrs.	29 Rc	23 Rc	21 Rc
		10 Hrs.	22 Rc	22 Rc	19 Rc
		20 Hrs.	25 Rc	22 Rc	19 Rc
Tube-Alloy 865-S MOD	48 Rc	6 Hrs.	47 Rc	42 Rc	35 Rc
		10 Hrs.	43 Rc	37 Rc	32 Rc
		20 Hrs.	42 Rc	36 Rc	31 Rc

STANDARD PACKAGING: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188 for International Customer Service.

50 lb. (23 kg)
Bag
S669810-055

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 36th St., Miami, FL 33166 (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 LLC is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

Revision Date: 210826 (Replaces 210820)

