

Tube-Alloy[®] Build UP-O



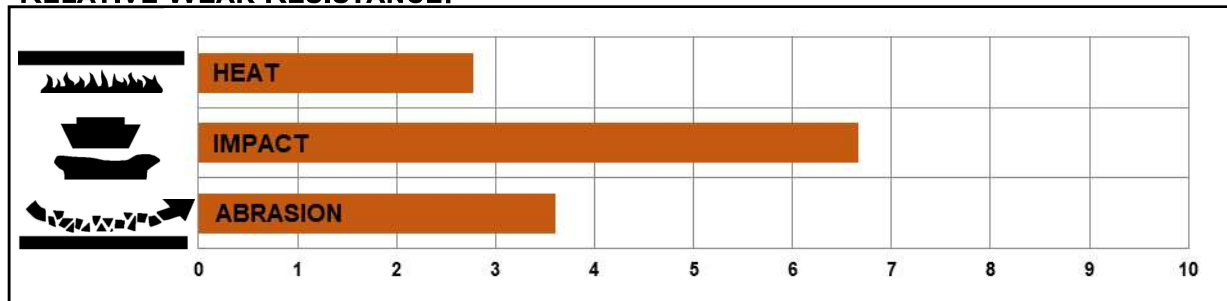
DESCRIPTION:

Tube-Alloy Build Up-O is a self-shielded, flux-cored wire that deposits a low alloy steel. It is designed for build-up carbon and low alloy steels only. The weld metals have good compressive strength and impact resistance, making them excellent bases for more abrasion-resistant alloys. The deposits have excellent resistance to cracking, even in multiple layers, and are well within the machinable range. Tube-Alloy Build Up-O is not recommended for joining. Conforms to AWS A5.21, classification ERcFe-1A.

OPERATIONAL CHARACTERISTICS:

Tube-Alloy Build Up-O has a steady arc with a globular transfer. It can operate successfully over a wide range of parameters. Spatter and noise levels are minimal, with a complete, easily removed slag cover—even at high temperatures. Out-of-position welding is limited to a horizontal shelf technique.

RELATIVE WEAR RESISTANCE:



Microstructure: Low Carbon Martensitic

TYPICAL WELD METAL CHEMICAL COMPOSITION* (Chem Pad):

Weld Metal Analysis (%)		AWS A5.21 ERcFe-1A Annex A7.1.1
Carbon (C)	0.12	0.05—0.25
Manganese (Mn)	2.80	1.7—3.5
Silicon (Si)	0.80	1.0
Chromium (Cr)	1.20	0.5—3.5
Iron (Fe)	Balance	Balance

Note: AWS Specification single values are maximums

TYPICAL DEPOSIT HARDNESS* (AS DEPOSITED):

Layer(s)	1020 Steel	4130 Steel
1	30 Rc	26 Rc
2	28 Rc	30 Rc
3	25 Rc	26 Rc

- Abrasion resistance: Fair
- Impact resistance: Very Good
- Machinability: Excellent
- Can be flame cut
- Magnetic
- Heat-treatable

*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.XX 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.

Tube-Alloy[®] Build UP-O

RECOMMENDED OPERATING PARAMETERS*:

Diameter Inches (mm)	Type of Power	Optimum Amps	Volts	Deposition Rate			CTWD	
				Amps	lbs/hr	(kg/hr)	Inches	(mm)
1/16" (1.6 mm)	DCEP	225-275	23-25	200.0	6.0	(2.7)	1 -1 1/2	(25-38)
1/16" (1.6 mm)	DCEP	275-350	24-27	250.0	10.0	(4.5)	1 -1 1/2	(25-38)
1/16" (1.6 mm)	DCEP	350-400	26-29	300.0	14.0	(6.4)	1 -1 1/2	(25-38)

- Start with **middle ranges** and adjust accordingly. Higher amperages will increase deposition rate, dilution, and heat input to base metal, increasing voltage will widen and flatten bead profile, but excessive voltage will result in porosity.
- Too much electrical stick-out may result in increased spatter, too little may result in internal porosity.

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 Inches (mm)	33-lb. (15 kg) Spool
Net Pallet Weight	2376-lb. (1078 kg)
1/16 (1.6)	S600419-029

APPLICATIONS:

- Bucket Teeth and Lips
- Crane Wheels
- Dragline Buckets
- Dragline Chains
- Dredge Ladder Rolls
- Geer Teeth
- Kiln Trunnions
- Mine Car Wheels
- Spindles
- Steel Shafts
- Wobbler Ends

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.

Hobart and is a registered trademark of Hobart Brothers LLC, Troy, Ohio.

Revision Date: 210803 (Replaces 200825)

