Tube-Alloy 242-O



DESCRIPTION:

Tube-Alloy 242-O is a self-shielded, flux-cored wire that deposits a premium martensitic alloy steel. It has excellent resistance to adhesive (metal-to-metal) wear. The deposit's good resistance to abrasion and impact makes it a versatile overlay alloy. It is designed for use as an overlay on carbon and low-alloy steels or a base of Tube-Alloy Build Up-O. With proper preheating, crack-free deposits can be obtained. Tube-Alloy 242-O should never be used for joining. Similar to AWS A5.21, classification ERC Fe-2.

OPERATIONAL CHARACTERISTICS:

Tube-Alloy 242-O has a steady arc with a globular transfer. Spatter and noise levels are minimal, with a complete, easily removed slag cover. Out-of-position welding is limited to a horizontal shelf technique.

ABRASION IMPACT HEAT Impact

RELATIVE WEAR RESISTANCE:

TYPICAL WELD METAL CHI WELD METAL ANALYSIS	AWS A5.21 ANNEX A 7.1.1 ERC FE-2		
CARBON (C)	0.25	0.10 - 0.30	
MANGANESE (MN)	1.30	0.5 - 2.0	
SILICON (SI)	0.7	1.0	
CHROMIUM (CR)	4.0	1.8-3.8	
MOLYBDENUM (MO)	0.50	1.0	
IRON (FE)	BAL.	Rem.	

FOR AWS CLASSIFICATION SINGLE VALUES ARE MAXIMUM

TYPICAL DEPOSIT HARDNESS* (As Deposited):

	NUMBER OF LAYERS	1020 Steel as deposited
HARDNESS	1	36 Rc
	2	39 Rc
	3	42 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. 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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TYPICAL MECHANICAL PROPERTIES (AS WELDED):

- ABRASION RESISTANCE: Good
- IMPACT RESISTANCE: Good
- MACHINABLE
- CUTTING: Can be oxy-fuel (flame) cut
- Magnetic

RECOMMENDED OPERATING PARAMETERS:

Diameter		Stick-Out		Optimum	Optimum		Deposition Rate	
Inches	MM	Polarity	Inches	MM	Amps	Volts	Amps	Lbs./Hr
1/16	1.6	DCEP	1"-1.5"	25-38	225-275	23-25	200	6
					275-350	24-27	250	10
					350-400	26-29	300	14

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 stickout may result in increased spatter, and too little may result in internal porosity.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		
Inches	mm	33-Ib. Spool
1/16	1.6	S604219-029

APPLICATIONS:

- Carbon Steel Frogs
- Carbon Steel Rolls
- Crane Wheels
- Idlers
- Rail Ends
- Steel Shafts
- Switch points
- Tractor Rollers

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.

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