

Tube-Alloy[®] 255-G



DESCRIPTION:

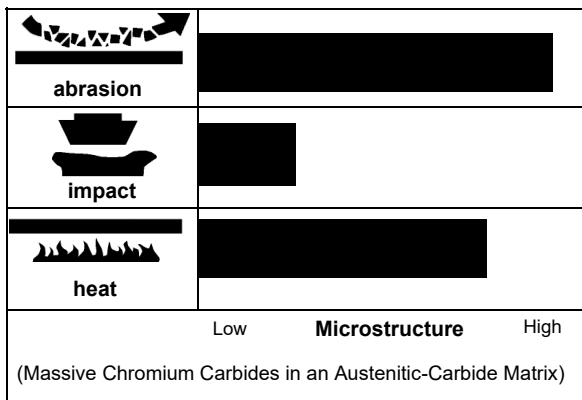
Tube-Alloy 255-G is a small diameter, gas-shielded hard surfacing wire that deposits an extremely wear resistant chromium-carbide overlay. It is designed for overlay on carbon, low alloy, cast iron, and austenitic manganese base metals. It outlasts competitive wires which deposit martensitic deposits 9 to 1.

Stress-relief cracking will readily occur with this product. This cracking is not detrimental to the wear properties of the deposit and provides some degree of stress relief for the weld metal. Similar to AWS A5.21, classification ERCFeCr-A10.

OPERATIONAL CHARACTERISTICS:

Tube-Alloy 255-G operates with a small ball globular/spray transfer with 98% Ar/2% O₂ or 75-90% Ar/balance CO₂ shielding gas. The deposit exhibits good bead tie-in and appearance. The wire can be applied out of position in the short arc mode building on the shelf of the previous pass.

RELATIVE WEAR RESISTANCE:



Similar to AWS A5.21
ERCFeCr-A10
Annex A 7.1.13

TYPICAL WELD METAL PROPERTIES* (Chem Pad):

Weld Metal Analysis		
Carbon (C)	5.30	5.00-7.00
Manganese (Mn)	1.00	0.5-2.5
Silicon (Si)	0.40	1.5
Chromium (Cr)	18.00*	20-25*
Iron (Fe)	Bal.	Bal.

For AWS Classification Single Values are Maximum

TYPICAL MECHANICAL PROPERTIES* (As Welded):

	Number of Layers	As-Deposited on	
		1020 Steel	Mn Steel
Hardness	1	58 Rc	47 Rc
	2	61 Rc	51 Rc
	3	65 Rc	54 Rc

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*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. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers LLC.

Tube-Alloy[®] 255-G

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Abrasion resistance:	Excellent
Impact resistance:	Poor
Nonmachinable:	Grinding is difficult
Cannot be flame cut	
Deposit relief check cracks readily	
Deposit maintains hot hardness to 1250°F	
Thickness should be limited to three layers maximum	

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Stick-Out		Optimum Amps	Volts
Inches	mm		Inches	mm		
.045	1.2	DCEP	1/2 - 1	13 - 25	150 - 180 180 - 210	22 - 24 24 - 26

Use with 98% Argon/2% Oxygen or 90% Argon/10% Carbon Dioxide shielding gas. 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:

Diameter		25-lb. Spool
Inches	mm	
.045	1.2	S608412-029

APPLICATIONS:

- Ammonia Knives
- Augers
- Bucket Teeth and Lips
- Bulldozer End Bits and Blades
- Cement Chutes
- Coal Feeder Screws
- Coal Pulverizer Hammers, Rolls and Table
- Coke Chutes
- Coke Pusher Shoes
- Conveyer Screws
- Crusher Jaws and Cones
- Cultivator Chisels and Sweeps
- Dragline Buckets
- Dredge Cutter Heads and Teeth
- Dredge Pump Inlet Nozzle and Side Plates
- Fan Blades
- Grizzly Bars and Fingers
- Gyrotory Crusher Mantles and Cones
- Manganese Pump Shells
- Muller Tires
- Ore and Coal Chutes
- Pipeline Ball Joints
- Pug Mill Paddles
- Ripper Shanks
- Road Rippers
- Scraper Blades
- Screw Conveyors
- Sheepsfoot Tampers
- Sizing Screens
- Subsoiler Teeth

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.

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