# Tube-Alloy® 258-G



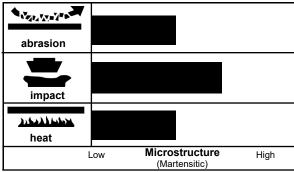
#### **DESCRIPTION:**

**Tube-Alloy 258-G** is a metal-cored, gas-shielded wire which deposits a sound hot work tool steel alloy of the AlSI H-12 type. It is extremely resistant to thermal shock and erosion at working temperatures. The alloy has good dimensional stability and uniform heat-treatment response, making it ideally suited for fabrication, modification, and repair of dies and other tool steel parts. Conforms to AWS A5.21, classification ERC Fe-8.

# **OPERATIONAL CHARACTERISTICS:**

Tube-Alloy 258-G has very smooth arc action, low fume levels, low spatter, and virtually slag-free welds. For use with 98% Ar/2%  $O_2$  shielding gas, smaller diameters perform well in vertical and overhead positions with short circuit or pulsed transfer modes. It can also be used in submerged arc welding with a neutral flux.

## **RELATIVE WEAR RESISTANCE:**



TYPICAL WELD METAL F	AWS A5.21 ERC Fe-8 Annex A 7.1.5	
Carbon (C)	0.40	0.30 - 0.60
Manganese (Mn)	1.00	1.0 - 2.0
Silicon (Si)	0.55	1.0
Chromium (Cr)	5.00	4.0 - 8.0
Molybdenum (Mo)	1.45	1.0 - 2.0
Tungsten (W)	1.25	1.0 - 2.0
Vanadium (V)	0.40	0.5
Iron (Fe)	Bal.	Rem

For AWS classification single values are maximum

# TYPICAL MECHANICAL PROPERTIES\* (As Welded):

	Number of Layers	As-Deposited on A36 Plate	After Tempering 10 Hrs. @ 950°F
Hardness	1	52 Rc	
	2	53 Rc	
	3	57 Rc	54 Rc
	3		54 Ro

Continued on back

<sup>\*</sup>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® 258-G

# TYPICAL MECHANICAL PROPERTIES\* (As Welded):

Abrasion resistance	Good			
Impact resistance	Good			
Nonmachinability in as-welded condition - grinding only				
Flamed cutting	Difficult			
Good resistance to softening at elevated temperatures				
Heat treatable				
Good dimensional stability				

### RECOMMENDED OPERATING PARAMETERS:

Diame Inches	eter mm	Type of Pow- er	Sticl Inches	k-Out mm	Optimum Amps	Volts	Deposit Amps	ion Rate lb/hr
0.45	1.2	DCEP	1/2 - 1	13 - 25	120 - 160 <b>160 - 190</b> 190 - 230	19 - 23 <b>24 - 25</b> 26 - 27	130 180 220	4 7 10
1/16	1.6	DCEP	1 - 1-1/2	25 - 38	225 - 275 <b>275 - 350</b> 350 - 400	23 - 25 <b>24 - 27</b> 26 - 29	200 250 300	6 10 14

Use with 98% Ar/2% O<sub>2</sub> shielding gas. 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:**

Dian Inches	neter mm	33 lb. Spool	50 lb. Spool
.045	1.2	S595412-029	
1/16	1.6	_	S595419-027

# **APPLICATIONS:**

- · Clean Out Rings
- · Die Holders
- Dummy Blocks
- Extrusion Dies
- · Forming Dies
- Forging Dies
- · Header Dies
- · Hot Forming Dies
- Gripper Dies
- · Guide Rolls
- Mandrels
- · Swaging Dies

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

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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