

# Tube-Alloy<sup>®</sup> 258 TiC-O



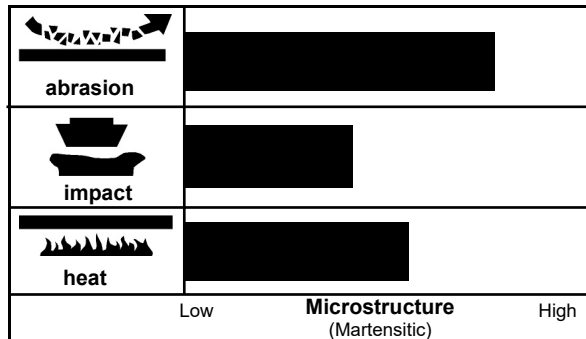
## DESCRIPTION:

**Tube-Alloy 258 TiC-O** is a self-shielded, flux-cored wire that deposits a martensitic alloy with finely dispersed titanium carbides (TiCs). It is particularly good for resisting high stress abrasive wear. The alloy also has good hot hardness. Deposits can be applied crack free with proper procedures.

## OPERATIONAL CHARACTERISTICS:

Tube-Alloy 258 TiC has a steady arc with a globular transfer. Spatter and noise levels are minimal, and the slag cover is minimal. It is designed primarily for use in automatic applications without slagging between passes. Out-of-position welding is limited to a horizontal shelf technique.

## RELATIVE WEAR RESISTANCE:



## TYPICAL WELD METAL PROPERTIES\* (CHEM PAD):

### Weld Metal Analysis

|                 |      |
|-----------------|------|
| Carbon (C)      | 2.10 |
| Manganese (Mn)  | 1.30 |
| Silicon (Si)    | 1.80 |
| Chromium (Cr)   | 7.00 |
| Molybdenum (Mo) | 1.60 |
| Titanium (Ti)   | 6.00 |
| Iron (Fe)       | Bal. |

## TYPICAL MECHANICAL PROPERTIES\* (AS WELDED):

|                                  | Number of Layers | As-Deposited on 1020 Steel |
|----------------------------------|------------------|----------------------------|
| Hardness                         | 1                | 60 Rc                      |
|                                  | 2                | 55 Rc                      |
|                                  | 3 - 8            | 48 Rc                      |
| Abrasion resistance              |                  | Excellent                  |
| Impact resistance                |                  | Good                       |
| Nonmachinable                    |                  | Grinding only              |
| Cannot be flame cut              |                  |                            |
| Magnetic                         |                  |                            |
| Maintains hot hardness to 1000°F |                  |                            |

\*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.

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## RECOMMENDED OPERATING PARAMETERS:

| Diameter |     | Type of Power | Stick-Out |         | Optimum Amps     | Volts          | Deposition Rate |      |
|----------|-----|---------------|-----------|---------|------------------|----------------|-----------------|------|
| Inches   | mm  |               | Inches    | mm      |                  |                | Amps            | Amps |
| 1/16     | 1.6 | DCEP          | 1 - 1 1/2 | 25 - 38 | 225 - 275        | 23 - 25        | 200             | 6    |
|          |     |               |           |         | <b>275 - 350</b> | <b>24 - 27</b> | 250             | 10   |
|          |     |               |           |         | 350 - 400        | 26 - 29        | 300             | 14   |
| 7/64     | 2.8 | DCEP          | 1 1/2 - 2 | 38 - 51 | 350 - 400        | 24 - 27        | 300             | 11   |
|          |     |               |           |         | <b>400 - 450</b> | <b>26 - 29</b> | 350             | 14   |
|          |     |               |           |         | 450 - 500        | 28 - 32        | 400             | 18   |

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:

| Diameter |     | 25-lb. Spool | 250-lb. Auto-Pak |
|----------|-----|--------------|------------------|
| Inches   | mm  |              |                  |
| 1/16     | 1.6 | S605919-029  | --               |
| 7/64     | 2.8 | --           | S605939-065      |

## APPLICATIONS:

- Paving agitator screws
- Crusher rolls and hammers
- Agricultural implements
- Conveyor screws of all kinds
- Mixer blades
- Shovel bucket teeth and lips
- Dozer blades
- Sugar cane shredding knives
- Bed knives in the wood / pulp industry
- Wood chopping knives

Note: Do not use on stainless steel and C-Mn austenitic steels.

**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](mailto: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](http://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](http://www.hobartbrothers.com).

Because Hobart Brothers LLC is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

Tube-Alloy is a registered trademark of Hobart Brothers LLC, Troy, Ohio.

Revision Date: 200807 (Replaces 150305)

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