



Quality Management System  
in accordance with  
**ISO 9001:2000**  
Cert # 05-R0925

# 5183 ALUMINUM Welding wire

U.S. ALLOY CO.  
dba Washington Alloy  
7010-G Reames Rd.  
Charlotte, NC 28216  
[www.weldingwire.com](http://www.weldingwire.com)



### ALLOY DESCRIPTION AND APPLICATION;

5183 is an aluminum filler that has improved strengths on alloys such as 5086 compared to 5356 that may not meet the needed tensile. Commonly used on marine components, drilling rigs, cryogenics, railroad cars, storage tanks - base metals of 5083, 5086, 5456, to each other or to 5052, 5652 and 5056.

### TYPICAL GMAW WELDING PROCEDURES; DCEP

| Wire Diameter | Amps    | Volts | Travel speed (ipm) | Argon (cfh) |
|---------------|---------|-------|--------------------|-------------|
| 0.030         | 60-175  | 15-24 | 25-45              | 25-30       |
| 0.035         | 70-185  | 15-27 | 25-40              | 30-35       |
| 3/64          | 125-260 | 20-29 | 24-35              | 35-45       |
| 1/16          | 170-300 | 24-30 | 28-38              | 45-55       |
| 3/32          | 275-400 | 26-31 | 14-20              | 60-75       |

### TYPICAL GTAW WELDING PROCEDURES; ACHF with Pure or Ziconiated

Hemisphere shape tungsten tip

| Filler Wire Size | Tungsten | Amps    | Volts | Gas Cup Size | Argon (cfh) | Base thickness |
|------------------|----------|---------|-------|--------------|-------------|----------------|
| 1/16"            | 1/16"    | 60-80   | 15    | 3/8"         | 20          | 1/16"          |
| 3/32"            | 3/32"    | 125-160 | 15    | 3/8"         | 20          | 1/8"           |
| 1/8"             | 1/8"     | 190-220 | 15    | 7/16"        | 20          | 3/16"          |
| 5/32"            | 5/32"    | 200-300 | 15    | 1/2"         | 25          | 1/4"           |
| 3/16"            | 3/16"    | 330-380 | 15-20 | 5/8"         | 25          | 3/8"           |
| 1/4"             | 1/4"     | 400-450 | 25    | 5/8"         | 25          | 1/2"           |

Procedures are based on flat position and may vary with change in position, base metals, filler metals, equipment and other changes.

### TYPICAL CHEMISTRY AND PROPERTIES;

| Magnesium | Titanium | Manganese | Chromium  | Copper | Silicon | Zinc | Iron | Beryllium |
|-----------|----------|-----------|-----------|--------|---------|------|------|-----------|
| 4.3-5.2   | 0.15     | 0.50-1.00 | 0.05-0.25 | 0.10   | 0.40    | 0.25 | 0.40 | 0.0008    |

Aluminum Remainder and others each 0.50 & total 0.15      All values are maximum percentage unless noted

Solidus: 1075°F      Liquidus: 1180°F      Density: 0.096 lbs./cu. In.      Anodize color: White  
Average Tensile Strength All weld metal (as welded) 41,000 psi (283 mpa)

**AVAILABLE SIZES:** TA 5183= Spools of .030, .035, 3/64, 1/16, 3/32

TB 5183 = Cut lengths of 1/16, 3/32, 1/8, 5/32

Other sizes available - please inquire

**SPECIFICATIONS;**    ANSI/AWS A5.10      ER/R 5183  
                                 ASME SFA5.10      ER/R 5183

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