WA. ALLOY CO.

WASHINGTON ALLOY'S Quality Management System is Certified to ***ISO 9001:2008*** *Cert # 05-R0925*

4943 ALUMINUM Welding wire

American Welding Society Sustaining Company Member

GAWDA GASES AND WELDING DISTRIBUTORS ASSOCIATION

ALLOY DESCRIPTION AND APPLICATION;

4943 is high strength 5.5% silicon aluminum filler with increased yield /shear strengths recommended for welding of 1XXX, 3XXX, 4XXX, 5XXX (less than 2.5% Mg), 6XXX, grades and cast alloy such as 443, 355, 356 and 214. Used in many 4043 and 4643 applications yielding elite post weld heat treated requirements. Precise controlled chemistry gives operator appeal with improvement of feed-ability, less smut, stable arc and discoloration.

TYPICAL GMAW WELDING PROCEDURES; DCEP

Wire Diameter	Travel speed (ipm)	Amps	Volts	Travel speed (ipm)	Argon (cfh)
0.035	275-570	70-185	15-27	25-40	30-35
3/64	175-480	125-260	20-29	24-35	35-45
1/16	175-350	170-300	24-30	28-38	45-55

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

TYPICAL CHEMISTRY AND PROPERTIES;

Silicon	Iron	Copper	Manganese	Magnesium	Zinc	Titanium	Beryllium
5.0-6.0	0.40	0.10	0.05	0.10-0.50	0.10	0.15	0.0003

Aluminum Remainder and others each 0.05 & total 0.15 All values are maximum percentage unless noted

Solidus:1065°F Liquidus:1170°F Density: 0.097 lbs./cu. In. Anodize color: Gray

Average Tensile Strength All weld metal (as welded) 35,000 ; Shear psi 21,000

AVAILABLE SIZES: TA 4943 = Spools of 3/64
TB 4943 = Cut lengths of 1/16, 3/32, 1/8

SPECIFICATIONS; **ANSI/AWS** A5.10 ER/ R 4943
ASME SFA5.10 ER/ R 4943

Other sizes available – please inquire

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