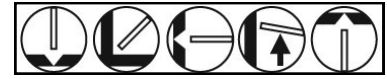


Hobart® Maxal® 4943



AWS A5.10: ER4943, R4943

WELDING POSITIONS:



FEATURES:

- 25% higher UTS & 50% higher yield strength than 4043 in the as welded condition (typical)
- Moderate/high strength (35 ksi typical)
- Low melting temperature/high fluidity
- Low welding smut and discoloration
- Low ductility, formability and lower toughness (similar to 4043)
- Moderate electrical conductivity and thermal conductivity

BENEFITS:

- Post weld fully heat treatable requiring no base metal dilution
- Excellent corrosion resistance
- Low shrinkage rate/reduced distortion
- Low hot cracking sensitivity in most applications

APPLICATIONS: Current 4043 and 4643 applications, welding 1xxx, 3xxx, 5xxx with less than 3.0% Mg (example 5052) & 6xxx series base metals

- Post weld age, post weld heat treat & age applications
- Aerospace hardware
- Ship decks
- Automotive/motorcycle frames
- Ladders and frames
- Furniture
- Sports products - scooters/bicycles
- Alloy 356 castings
- General repair and maintenance
- Wheels

SHIELDING GAS: 100% Argon (Ar) or Argon/Helium mixtures, typical: GMAW - 35-50 cfh (14-24 l/min), GTAW 20-30 cfh (10-14 l/min).

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) for GMAW, AC for GTAW

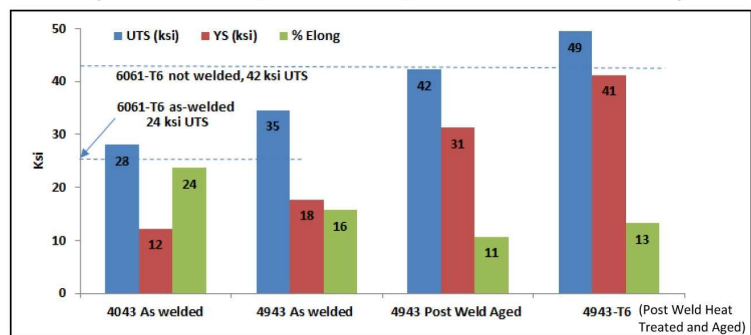
STANDARD DIAMETERS: 0.035" (0.9 mm), 3/64" (1.2 mm), 1/16" (1.6 mm), 3/32" (2.4 mm), 1/8" (3.2 mm)

STORAGE: Product should be stored in a dry, enclosed environment, and in its original intact packaging

TYPICAL CHEMICAL VALUES*:

Weld Metal Analysis (%)	4943
Silicon (Si)	5.0-6.0
Iron (Fe)	0.40
Copper (Cu)	0.10
Manganese (Mn)	0.05
Magnesium (Mg)	0.30-0.50
Zinc (Zn)	0.10
Titanium (Ti)	0.15
Beryllium (Be)	<0.0003
Others Each	0.05
Others Total	0.15
Aluminum (Al)	Remainder

Tensile Strength Comparison, 4043 vs. 4943 (All weld metal, MIG welded, no base metal dilution¹)



¹Insufficient dilution can be a concern with alloy 4043, which can result in low weld strength. Alloy 4943 eliminates the need for base metal dilution to achieve good weld strength in as-welded, post weld aged and T6 condition.

*Unless noted-single values are maximums.

TYPICAL PROPERTIES:

Melting Range	Density	Electrical/Thermal Conductivity
1065-1175°F	0.097 lbs/in ³	41% IACS/1040 EU

As Welded UTS Typical	Anodized Color	Elevated Temp. Applications +150°F
35 ksi	Gray	YES

*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. Typical data are those obtained when welded and tested in accordance with AWS A5.10 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers LLC.

Hobart® Maxal® 4943

Diameter		Base Material Thickness		Amps		Volts		Wire-Feed Speed (ipm)	
Inches	(mm)	Inches	(mm)	4xxx	5xxx	4xxx	5xxx	4xxx	5xxx
0.035	(0.9)	1/16	(1.6)	90	100	23	21	300	350
0.035	(0.9)	1/8	(3.2)	130	140	24	22	400	450
0.035	(0.9)	1/4	(6.4)	170	180	25	23	500	600
3/64	(1.2)	3/32	(2.4)	110	120	25	24	170	220
3/64	(1.2)	1/8	(3.2)	150	160	26	25	270	330
3/64	(1.2)	1/4	(6.4)	190	220	26	25	320	370
3/64	(1.2)	3/8	(9.5)	220	230	27	25	390	450
1/16	(1.6)	1/4	(6.4)	200	210	26	24	170	200
1/16	(1.6)	3/8	(9.5)	230	240	27	25	200	230
1/16	(1.6)	1/2	(12.7)	260	270	28	26	240	270
1/16	(1.6)	3/4	(19.1)	280	290	29	27	260	300
1/16	(1.6)	1	(25.4)	300	310	30	28	280	320

Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of aluminum being welded.

See Above: This information was determined by welding using 100%Argon shielding gas with a flow rate between 35-50 cfh (14-24 l/min).

AVAILABLE DIAMETERS AND PACKAGES: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188 for International Customer Service.

Diameter Inches (mm)	1-lb. (0.45 kg) Plastic Spool	16-lb. (7.3 kg) Wire Basket	16-lb. (7.3 kg) Plastic Spool	22-lb. (10 kg) Plastic Spool	300-lb. (136 kg) Drum	10-lb. (4.5 kg) Tube, 36-In Long Cut Length TIG Rod
Net Pallet Weight	1458-lb. (661 kg)	1296-lb. (588 kg)	1296-lb. (588 kg)	1782-lb. (808 kg)	600-lb. (272 kg)	2160-lb. (980 kg)
0.035 (0.9)	494303504	494303512	494303512P	—	—	—
3/64 (1.2)	—	494304712	494304712P	—	494304723	—
1/16 (1.6)	—	494306212	—	494306212P22	—	—
3/32 (2.4)	—	—	—	—	—	494309470
1/8 (3.2)	—	—	—	—	—	494312570

300 lb drum dimensions: diameter = 23-1/2"; height = 36"

100 lb drum dimensions: diameter = 23-1/2"; height = 18"

CONFORMANCES AND APPROVALS:

- **AWS A5.10**, ER4943, R4943
- **ASME SFA 5.10**, ER4943, R4943
- **CWB**, ER4943 (0.9 mm - 1.6 mm)
- **ABS**, ER4943, 100% Ar or Ar/He Mix (0.035" - 0.062")
- **ABS**, R4943, 100% Ar (0.062" - 0.156")
- **vd TUV 1153**

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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Revision Date: 210805 (Replaces 210804)
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