

Hobart® Maxal® 4943



AWS A5.10: ER4943, R4943

WELDING POSITIONS:



FEATURES:

- Moderate/high strength (33 ksi typical)
- Eliminates the need for base metal dilution
- Minimal welding smut and discoloration
- Low melting temperature/high fluidity
- 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
- Post weld age, post weld heat treat & age applications
- Sports products - scooters/bicycles
- Automotive/motorcycle frames
- Ship decks
- Furniture
- Wheels

- Welding 1xxx, 3xxx, 5xxx with less than 2.5% Mg (example 5052) & 6xxx series base metals
- Aerospace hardware
- Ladders and frames
- Alloy 356 castings
- General repair and maintenance

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

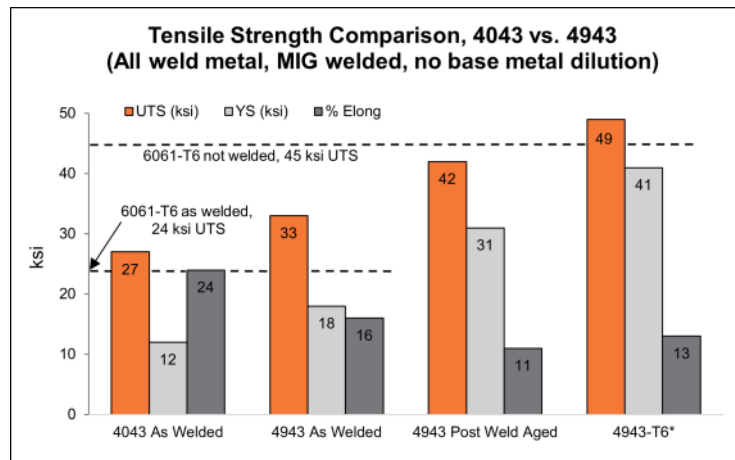
STANDARD DIAMETERS: 0.035" (0.9 mm), 3/64" (1.2 mm), 1/16" (1.6 mm), 3/32" (2.4 mm), 1/8" (3.2 mm), 5/32" (4.0 mm)

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

TYPICAL CHEMICAL VALUES*:

Weld Metal Analysis (%)	ER & R 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

*Unless noted-single values are maximums.



*Post Weld Heat Treated and Aged

TYPICAL MECHANICAL PROPERTIES:

Mechanical Tests	ER & R 4943	AWS Spec
Tensile Strength	33,000 psi (228 MPa)	30,000 psi (205 MPa)

TYPICAL PHYSICAL PROPERTIES:

Melting Range	Density	Electrical/Thermal Conductivity	Anodized Color	Elevated Temp. Applications +150°F (+66°C)
1065-1175°F (575-635°C)	0.097 lbs/in ³ (2.685 g/cm ³)	41% IACS/1040 EU	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 Inches (mm)	Weld Position	Amps	Volts	Wire Feed Speed		Deposition Rate		CTWD	
				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
0.035" (0.9 mm)	All Position	135	20.7	400	(10.2)	6.4	(2.9)	1/2	(13)
0.035" (0.9 mm)	All Position	145	21.3	450	(11.4)	7.2	(3.3)	1/2	(13)
0.035" (0.9 mm)	All Position	160	21.8	500	(12.7)	8.0	(3.6)	1/2	(13)
0.035" (0.9 mm)	All Position	165	22.0	550	(14.0)	8.8	(4.0)	1/2	(13)
0.035" (0.9 mm)	All Position	185	22.3	600	(15.2)	9.6	(4.3)	1/2	(13)
3/64" (1.2 mm)	All Position	180	21.4	300	(7.6)	7.9	(3.6)	1/2	(13)
3/64" (1.2 mm)	All Position	210	21.8	350	(8.9)	9.2	(4.2)	1/2	(13)
3/64" (1.2 mm)	All Position	225	22.4	400	(10.2)	10.5	(4.8)	1/2	(13)
3/64" (1.2 mm)	All Position	260	24.0	450	(11.4)	11.9	(5.4)	5/8	(16)
3/64" (1.2 mm)	All Position	270	24.3	500	(12.7)	13.2	(6.0)	5/8	(16)
1/16" (1.6 mm)	All Position	160	20.0	150	(3.8)	7.5	(3.4)	3/4	(19)
1/16" (1.6 mm)	All Position	210	21.0	200	(5.1)	10.0	(4.5)	3/4	(19)
1/16" (1.6 mm)	All Position	250	22.0	250	(6.4)	12.5	(5.7)	3/4	(19)
1/16" (1.6 mm)	All Position	295	23.0	300	(7.6)	15.1	(6.8)	3/4	(19)

Maintaining a proper welding procedure - including cleaning, oxide removal, 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) Box 36-in 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	494304712P22	494304723	—
1/16 (1.6)	—	494306212	—	—	—	—
3/32 (2.4)	—	—	—	—	—	494309470
1/8 (3.2)	—	—	—	—	—	494312570
5/32 (4.0)	—	—	—	—	—	494316670

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), R4943 (1.6 mm - 4.0 mm)
- **ABS**, ER4943 (0.035" - 0.062"), R4943 (0.062" - 0.156")
- **CE Marked** per CPR 305/2011 (0.035" - 0.156")
- **DB**, EN ISO 18273-S AL 4943 (AlSi5Mg)

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.

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

Revision Date: 250114 (Replaces 241216)

624-D, INDEX

