

GTAW - TIG Welding Rod

Ventory manufactures Premium Quality TIG Rods that are engineered for use in gas tungsten-arc welding applications where clean, oxide and porosity free weldments are required. Ventory is the world's only fully integrated aluminum wire and rod mill. That means we can control the quality and consistency of our products from start to finish, including melting raw material, continuous casting rod, to drawing, shaving, spooling, cleaning, testing and cutting of TIG rod. In fact, the same rigorous manufacturing processes and controls that go into the manufacturing of our world class aluminum MIG wire are utilized in the manufacturing of our TIG Rod products. Ventory TIG Rod is available in a variety of alloys and diameters to meet various aluminum welding fabrication requirements. TIG rods are stamped/embossed with the alloy for identification purposes. Choose Ventory TIG Rod — your assurance of the highest quality weldments and maximum welding performance.

Alloy and diameter availability :

TIG Welding Rod	1/16 (1.6mm)	3/32 (2.4mm)	1/8 (3.2mm)	5/32 (4.0mm)
5356	✱	✱	✱	✱
4043	✱	✱	✱	✱
1110	✱	✱	✱	✱
4047	✱	✱	✱	✱
5183	✱	✱	✱	✱
5554	✱	✱	✱	✱
5556	✱	✱	✱	✱

Packaging : Weight : 11.5lbs. (5kg.) , 22lbs. (10kg.)

Alloy 4043 Data Sheet

TYPICAL APPLICATIONS

- Welding Filter Wire
- Designed for Welding heat-treatable base alloys and more specifically the 6XXX alloys and most casting alloys
- Low sensitivity to weld cracking with the 6XXX series base alloys
- Lower melting point and more fluidity than the 5XXX series filler alloys
- Automotive components such as frame and drive shafts
- Bicycle frames

GENERAL INFORMATION

- AWS A5.10/A5.10M:1999 : ER4043
- ASME SFA-A5.10 : ER4043
- Canadian Welding Bureau (CWB) Approvals
- Non-Heat treatable
- Similar to AlMg5 (DIN)
- ISO designation: AlSi5
- Principle alloying elements: Silicon
- Applicable specifications: ANSI/AWS A5.10 (ER & R), AMS 4190

TYPICAL PROPERTIES

Melting range: 1065 - 1170°F

Resistance to corrosion : B (GEN.) A (SCC)

Conductivity : 42% IACS (-O)

Anodize Color : Gray

Density : 0.097 lb./cu.in.

CHEMISTRY

SILICON	IRON	COPPER	MANGANESE	MAGNESIUM	CHROMIUM	ZINC	TITANIUM	BERYLLIUM	OTHERS	
									EACH	TOTAL
4.5-6.0	0.8	0.3	0.05	0.05	-	0.1	0.2	0.0003	0.05	0.15

ALLOY CHARACTERISTICS

ALLOY 4043 IS ONE OF THE OLDEST AND MOST WIDELY USED WELDING AND BRAZING ALLOYS. THEY CAN BE CLASSIFIED AS A GENERAL PURPOSE TYPE FILLER ALLOY. THE SILICON ADDITIONS RESULT IN IMPROVED FLUIDITY (WETTING ACTION) TO MAKE THE ALLOY A PREFERRED CHOICE BY WELDERS. THE ALLOY IS LESS SENSITIVE TO WELD CRACKING AND PRODUCES BRIGHTER, ALMOST SMUT FREE WELDS.

Shielding Gas

- 100% Argon , Argon/Helium Mixtures , Flow Rate : 30-50 CFH

Alloy 5356 Data Sheet

TYPICAL APPLICATIONS

- Welding Filler Wire
- For Automotive bumpers and supports
- Bicycle frames
- Formed truck panels
- Structural frames in the shipbuilding industry

GENERAL INFORMATION

- AWS A5.10/A5.10M:1999 : ER5356
- ASME SFA-A5.10 : ER5356
- Lloyd's Register : WB/I1-S
- CWB/CSA W48-06 : ER5356
- Non-Heat treatable
- Similar to AlMg5 (DIN)
- ISO designation: AlMg5Cr(A)
- Principle alloying elements: Magnesium, Manganese, Chromium, Titanium
- Applicable specifications: ANSI/AWS A5.10 (ER & R)

TYPICAL PROPERTIES

Melting range: 1060 - 1175 °F	Resistance to corrosion : A (GEN) C (SCC)
Conductivity : 29% IACS (-O) 27% IACS (-H18)	Hardness (BHN) : 105 (-H18)
Density : 0.096 lb./cu.in.	Anodize Color : White

CHEMISTRY

SILICON	IRON	COPPER	MANGANESE	MAGNESIUM	CHROMIUM	ZINC	TITANIUM	BERYLLIUM	OTHERS	
									EACH	TOTAL
0.25	0.40	0.10	0.05-0.20	4.5-5.5	0.05-0.20	0.10	0.06-0.20	0.0003	0.05	0.15

ALLOY CHARACTERISTICS

A CHARACTERISTIC OF THE 5XXX SERIES OF ALLOYS IS THEIR SUSCEPTIBILITY TO STRESS CORROSION CRACKING WHEN THE WELD POOL CHEMISTRY IS GREATER THAN 3% MAGNESIUM AND THERE IS EXPOSURE TO PROLONGED TEMPERATURES IN EXCESS OF 150 °F.

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