

Aluminum Welding Wire & Electrodes

Alloy: WW4043

Conforms to Certification: AWS A5.10

Class: ER4043

ASME SFA A5.10

Alloy: ER4043

Weld Process: Mig & Tig

AWS Chemical Composition Requirements

Si = 4.5 - 6.0	Zn = 0.10 max
Fe = 0.80 max	Ti = 0.20 max
Cu = 0.30 max	Al = Remainder
Mn = 0.05 max	Be = 0.0003
Mg = 0.05 max	Other = 0.05 each - 0.15 max total

Recommended Operation of Welding Rods

Example

GMAW (Mig)

GTAW (TIG)

Diameter	.030	- All diameters (AC)
Amps (DC)	120 – 150	or DCEP for thin gauge
Volts	20 – 24	
Gas	Argon 30 CFH	- Argon or Argon
Travel speed	24 – 30 IPM	+ Helium for thick base metal

Deposited Chemical Composition % (Typical)

Deposited chemistry is influenced by many factors so no typical analysis can be recorded.

Application

ER4043 aluminum filler materials are silicon-aluminum types for welding of 6052 and 6063 types; in some cases, other aluminums are also welded with this type. Brazing of 1100 and 3003 can be accomplished with free flowing 4043 composition.

Deposited All Weld Metal Properties %

As-Welded

Deposited all weld metal properties are influenced by many factors such as weld process used, so no typical weld metal properties can be reported.

- The proper choice of aluminum filler metal mainly depends on the base metal properties to be achieved and Welding technique. Post weld cracking, corrosion resistance and behavior under elevated temperature also need to be taken into consideration.

Deposited Charpy-V-Notch Impact Properties %

Not applicable

- Cracking usually can be minimized by choosing a filler metal alloy of higher alloy content than the base metal.

