



Unibraze 4043

Specification: AWS A5.10 ER4043 / ASME SFA 5.10 ER4043 UNS A94043

Description: Unibraze 4043 is a 5% silicon all position aluminum welding wire used to weld heat treatable alloys. Recommended for welding 2014, 3003, 3004, 5052, 6061, 6101 base metals and cast alloys. It is used for welding bicycles, trucks, trailers, automotive parts and equipment. The addition on silicon improves wetting action yielding a more crack resistant, bright weld bead.

Typical Chemical Analysis %

	Al	Fe	Cu	Mn	Zn	Ti	Si	Mg	Others	Total others	Be*
AWS/ ASME	Bal.	.80 max	.30 max	.05 max	.10 max	.02 max	4.5 – 6.0	.05 max	.05 max	.15 max	.0003 max

**included in others*

Typical Properties

Melt Point	1065-1170°F
Density	.097 lbs/cu in. Other
Post Anodize Color	Gray

Typical Mechanical Properties **

Tensile Strength	20,000 – 34,000 psi
Yield Strength	10,000 – 28,000 psi
Elongation	4% - 12%

***dependent on base alloy welded*

GMAW Recommended parameters (DCEP)

Diameter	WFS ipm	Amps	Volts	LBS per 100'	Argon (cfh)
.030"	480-625	60-175	15-24	.65 – 1.25	25-30
.035"	450-750	70-185	15-27	1.0 – 4.25	30-35
3/64"	330-500	125-260	20-29	1.0-4.25	35-45
1/16"	250-450	170-300	24-30	38-66	45-75
3/32"	160-200	275-400	26-31	35-66	60-85

GTAW Recommended parameters (ACHF – with Pure or Ziconiated Hemisphere shape tungsten tip)

Base Thickness	Filler Wire Size	Tungsten	Amps	LBS per 100'	Gas Cup Size	Argon (cfh)
1/16"	1/16"	1/16"	60-80	.75	3/8"	20
3/32"	3/32"	3/32"	85-120	1.0	3/8"	20
1/8"	3/32"	3/32"	125-160	1.5	3/8"	20
3/16"	1/8"	1/8"	190-220	4.5-6.0	7/16"	25
¼"	5/32"	5/32"	200-300	8-10	½"	30
3/8"	3/16"	3/16"	330-380	15-20	5/8"	35
½"	¼"	¼"	400-500	25-40	5/8"	40