



# Unibraze 5183

**Specification: AWS A5.10 ER5183 / ASME SFA 5.10 ER5183**

**Description:** Unibraze 5183 is similar to 5356 with the addition of 5% Mg. It is a very high strength (40,000 psi) aluminum alloy used in marine and structural applications where high fracture toughness for impact resistance and exposure to corrosive elements are important. It is recommended for GTAW and GMAW welding of 5083, 5086, 5456, 6061, 6063, 7005 and 7039 alloys.

## Typical Chemical Analysis %

Al	Mg	Si	Cu	Mn	Cr	Zn	Ti	Fe	Others	Total Others	Be*
Bal.	4.3-5.2	.40 max	.10 max	.50-1.0	.05 - .25	.25 max	.15 max	.40 max	.05 max	.15 max	.0003 max

\*included in others

## Typical Properties

Melt Point	1075-1080°F
Density	.096 lbs/cu in.
Post Anodize Color	White

## Typical Mechanical Properties\*\*

Tensile Strength	40,000 – 45,000 psi
Yield Strength	18,000 – 26,000 psi
Elongation	12% - 16%

\*\*influenced by 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 Zirconiated 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