1100

ALUMINUM

SPECIFICATION/*CLASSIFICATION*: AWS A5.10 & ASME SFA-5.10 / *ER1100, R1100*

Description/Application:

WELDCOTE 1100 is 99% aluminum filler typically used on similar base metal such as 1060, 1070, 1080, 1100, 1350 and 3003. AWS A5.10 classification ER1100, R1100

Typical Filler Wire/Rod Chemistry in weight percent:

	Al	Si	Fe	Cu	Mn	Zn
AWS [1]	*99.0 Min*	*0.95*	*0.50 –0.80*	*0.05-0.20*	*0.05*	*0.10*

AWS[1] Chemical Composition Requirements Range with single value maximum. Others elements: each 0.05 maximum & total 0.15 maximum

Typical Mechanical Properties of Weld Metal:

Tensile Strength (psi)	13-18,000
Yield Strength (psi)	8-12,000
Elongation % in 2”	9.7%

Physical Properties

Solidus	1090ºF(643ºC)
Liquidus	1215ºF(657ºC)
Post Anodize Color	White with touch of gold
Density lbs. /cu in	.098

RECOMMENDED WELDING PARAMETERS: ER 1100

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive

Wire Diameter	WFS ipm	Amps	Volts	Consumption lb/100 ft	Argon (cfh)
0.030	480-625	60-175	15-24	0.65-1.25	25-30
0.035	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	3.8-66	45-75
3/32	160-200	275-400	26-31	35-66	60-85

GTAW (TIG) WELDING PROCEDURES; ACHF with Pure or Ziconiated Hemisphere shape tungsten tip

Base thickness	Filler Wire Size	Tungsten	Amps	Consumption lb/100 ft	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	7/16”	25
1/4"	5/32"	5/32"	200-300	8-10	1/2”	30
3/8"	3/16"	3/16"	330-380	15-20	5/8”	35
1/2"	1/4"	1/4"	400-450	25-40	5/8”	40

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Weldcote Metals believes this data to be accurate and to reflect qualified opinion regarding research.
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All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes, and other factors.

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