

NEXALLOY ER2319 – PRODUCT DATA SHEET

Nexalloy ER2319 is a filler alloy for 2219 base material that is used in high strength structural and aircraft applications where greater resistance to stress corrosion cracking and elevated temperature properties are required. Nexalloy ER2319 is heat treatable and provides higher strength and ductility than 4000 series filler alloys when welding 2000 series alloys.

NEXAL WELDING PRODUCTS APPROVALS AND SPECIFICATIONS

ANSI/ AWS A5.10/A5.10M/ASME SFA 5.10 (ER & R) 2319, AMS 4191 (Chemistry Only), ISO 18273 Al 2319/ AlCu6MnZrTi, EN AW-2319/Al Cu6Mn, TUV, CE 0035-CPR-C809.

Chemical Composition (weight %)

Aluminum	Remainder	Silicon	0.20 Max
Manganese	0.20-0.40	Magnesium	.02 Max
Iron	0.30 Max	Chromium	0.00
Vanadium	0.05-0.15	Zirconium	0.10-0.25
Copper	5.80-6.80	Titanium	0.10-0.20
Beryllium	0.0003 Max	Zinc	0.10 Max

Other Elements 0.05 Max & Total 0.15 Max

Typical Properties

Melting Range	10100 – 1190 F	543 – 643 C
Density	0.103 lbs./cu in.	
Post Anodize Color	Golden	
UTS	55ksi – 380MPA	
Elongation	H18 (2") 3%	

Wire and Rod Diameters Available

0.030" 0.035" 3/64" 1/16" 3/32" 1/8" 5/32" 3/16" 1/4" 5/64"

Packaging Available

Plastic Spools – 1LB/0.4KG, 5LB/2.2KG, 10LB/4.5KG, 16LB/7.2KG, 20LB/9KG

Metal Spools – 10LB/4.5KG, 15LB /6.8KG **TIG Rods** – 5LB/2.2KG, 10LB/4.5KG, 50LB/22.6KG

Drums – 150LB/68KG, 300LB/136KG

MIG Welding Procedures: DCEP

Wire Diameter Inches	WFS ipm	Amps	Volts	Consumption LB/100 Feet	Argon(cfh)
0.03	500-600	100-150	18-23	0.75-1	30-40
0.035	480-550	120-190	20-25	0.75-3	30-40
0.045	350-450	150-240	22-25	2.0-4.0	40-50
0.062	200-350	200-320	22-27	5.0-16.0	50-60

Mechanical Properties of GMAW Groove Joint Welds

BASE ALLOY	AS WELDED			POST WELD HEAT TREAT AND AGE					
	UTS(KSI)	UYS(KSI)	ELONG(%)	UTS(KSI)	UYS(KSI)	ELONG(%)	UTS(KSI)	UYS(KSI)	ELONG(%)
2014 -T6	70	60	13	43	28	5	60	46	5
2219 -T81	66	51	10	35	26	3	55	38	7



Nexal Aluminum Inc.
www.nexalloy.com

5938 Ambler Drive Mississauga, ON L4W 2N3
An ISO 9001:2015 Certified Company

Phone: 1-905-629-8282
Fax: 1-905-629-8532

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Aluminum Manufacturing since 1973