

## NEXALLOY ER4043A/4943 – PRODUCT DATA SHEET

Nexalloy ER4043A/4943 is an alternative alloy to 4043 with 25% higher Ultimate Tensile Strength (UTS) and 50% higher yield strength in the as welded condition. Similar to 4043 it possesses moderate to high strength (35 ksi typical), low melting temperature and high fluidity, low ductility, formability, and lower toughness as well as moderate electrical and thermal conductivity. 4043A/4943 may be used to weld 1XXX, 3XXX, 5XXX with less than 3.0% Mg. Common applications include automotive frames, aerospace hardware, bicycles, concrete forms, and furniture.

## NEXAL WELDING PRODUCTS APPROVALS AND SPECIFICATIONS

AWS A5.10/A5.10M/ASME SFA 5.10 Classification ER 4043A/4943, R 4043A/4943. TUV, CE 0035-CPR-C809.

### Chemical Composition (weight %)

Aluminum	Remainder	Silicon	5.0-6.0
Manganese	0.05 Max	Magnesium	0.10-0.50
Iron	0.40 Max	Titanium	0.15 Max
Copper	0.10 Max	Zinc	0.10 Max
Beryllium	0.0001 Max		
Other Elements	0.05 Max each & Total 0.15 Max		

### Typical Properties

Melting Range	1065 – 1175 F 574 – 635 C
Density	.097 lbs.\cu in.
Post Anodize Color	Gray
UTS	35ksi – 240MPA
Elongation	(2") 5%

### 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	WFS ipm	Amps	Volts	Consumption LB/100FT	Argon(cfh)
0.030"	480-625	60-175	15-24	0.65-1.25	25-30
0.035"	450-750	70-185	15-27	1.00-4.25	30-35
3/64"	330-500	125-260	20-29	1.00-4.25	35-45
1/16"	250-450	170-300	24-30	3.8-66	45-75
3/32"	160-200	275-400	25-31	35-66	60-85

### TIG Welding Procedures: ACHF

Base Thickness	Filler Wire Size	Tungsten	Amps	Consumption LB/100FT	Gas Cup Size	Argon(cfh)
1/16"	1/16"	1/16"	60-80	0.75	3/8"	20
3/32"	3/32"	3/32"	85-120	1.00	3/8"	20
1/8"	3/32"	3/32"	125-160	1.50	3/8"	20
3/16"	1/8"	1/8"	190-220	4.5-6.0	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"	400-500	25-40	5/8"	40



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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