



# Midalloy

**NI-MAX**

**NICKEL COATED**

**ELECTRODE**

**S P E C I F I C A T I O N S**

## **IMPORTANT REMINDER**

The data contained in this bulletin are intended for general information only, and not for specification purposes.

Applications suggested for these alloys are made to permit you to make your own evaluation and decision, and are not to be construed as either express or implied warranties of fitness for these or other applications.

All analyses should be considered as typical or average values, and are minimum or maximum only where indicated. They are not intended for specification purposes.

**PROTECT YOURSELF AND OTHERS** - Users should read and follow all recommended guidance on health and safety from their employer, the supplier, the manufacturer, and government authorities. These, at a minimum include the Warning Labels on the products and the Material Safety Data Sheets ("MSDS"). The MSDS and additional safety information may be found on materials or links at [www.midalloy.com](http://www.midalloy.com).

# NI-MAX STAINLESS STEEL COATED ELECTRODES

**Midalloy NI-MAX** Nickel Alloy Coated Electrodes are manufactured to exacting standards which meet or exceed all AWS/SFA corresponding specifications. We are proud that this is the first nickel-coated electrode to bear the Midalloy name. The quality and performance is unsurpassed in the industry.

## OUTSTANDING OPERATOR APPEAL:

- SPRAY TRANSFER TYPE ARC: VERY STABLE
- LOW SPATTER: EASY CLEAN-UP
- EASY PUDDLE MANIPULATION: LESS DEFECTS
- GOOD WASH: NO UNDERCUT
- EXCELLENT RESTRIKE: NO PROBLEM SPOT WELDING OR TACKING
- LESS PENETRATION: GOOD FOR OVERLAY
- LESS STUB LOSS: MORE PRODUCTION

GRADE	TYPICAL CHEMICAL ANALYSIS												Tensile Strength PSI	Yield PSI	Elongation %	F #	Typical Application
	C	Mn	Si	Fe	P	S	Cr	Ni	Mo	Cb+Ta	Cu	Other					
NI-MAX 55 ENiFe-CI AWS/SFA 5.15	1.25	.90	1.40	45.03	.010	.002	-	51.0	-	-	.022	AL .60	83,000	59,000	8	-	For welding of cast irons to themselves, for repair of cast irons, and for welding cast iron to mild steels.
NI-MAX 99 ENi-CI AWS/SFA 5.15	.82	.27	1.75	4.3	.010	.005	-	91.6	-	-	-	-	71,000	56,000	5	-	For welding and repair of various grey cast and malleable cast iron grades. For machining in thin layers, and joining where high strength is not required.
NI-MAX 187 ECuNi AWS/SFA 5.6	.03	1.8	.35	.62	.009	.006	-	30.5	-	-	BAL	Ti .20	54,500	37,500	28	34	Used for welding 70/30, 80/20 and 90/10 cupronickel alloys. May be used for cladding with appropriate butter layer.
NI-MAX 190 ENiCu-7 AWS/SFA 5.11	.03	3.4	.9	.95	.009	.006	-	66.2	-	-	BAL	Ti .25 Al .05	75,500	52,000	39	42	Used for welding of Monel® 400 type alloys to themselves and to carbon steels.
NI-MAX A ENiCrFe-2 AWS/SFA 5.11	.04	1.75	.32	9.0	.012	.013	15.5	70.0	1.50	1.25	.02	-	89,000	72,000	36	43	Welding Incoloy® 800, Inconel® 600 and Inconel® 601 alloys to themselves and to mild, low alloy and stainless steels. Welding 3%, 5% and 9% Ni steels.
NI-MAX 182 ENiCrFe-3 AWS/SFA 5.11	.045	6.43	.38	7.52	.006	.004	14.75	68.5	-	1.56	.06	Ti .30	84,500	53,500	35	43	For welding Inconel® alloys 600 and 601 to themselves, and to mild, low alloy and stainless steels.
NI-MAX 117 ENiCrCoMo-1 AWS/SFA 5.11	.065	.80	.30	2.0	.012	.005	23.5	52.5	8.8	-	.05	Al .65 CO 11.5	110,000	87,000	26	43	For welding Inconel® 617 to itself. Can also be used for a variety of dissimilar welds for high temperature applications.
NI-MAX 112 ENiCrMo-3 AWS/SFA 5.11	.03	.20	.43	2.0	.005	.005	21.53	63.2	9.07	3.42	.02	-	114,500	88,500	34	43	A wide range of applications including welding Inconel® 625, Inconel® 601, Incoloy® 800, Incoloy® 801 to themselves. Welding dissimilar metals including 625, 9% Ni steels, Incoloy 825 and Monel to carbon and stainless steels.
NI-MAX 276 ENiCrMo-4 AWS/SFA 5.11	.02	.24	.09	6.02	.012	.006	15.95	58.0	15.5	-	.20	CO .13 V .02 W 3.63	105,000	79,000	39	44	For welding Inconel® C-276 to itself and to similar alloys. Can be used for dissimilar welds involving nickel alloys, stainless steels, and low-alloy steels.
NI-MAX 122 ENiCrMo-10 AWS/SFA 5.11	.015	.33	.15	2.7	.010	.006	21.29	57.75	14.0	-	.05	V .01 W 3.24 CO .01	114,000	79,000	36	44	For welding Inconel® 622 to itself and to similar alloys. Can be used for dissimilar welds involving nickel-chromium-molybdenum alloys and molybdenum stainless steels.

OTHER GRADES AVAILABLE UPON REQUEST      STANDARD PACKAGE: 6/10 POUND CANS IN A 60 POUND BOX

TYPICAL WELDING PARAMETERS			
Direct Current, Electrode Positive		Amperage	
Diameter	Voltage	Flat	Vertical & Overhead
3/32"(2.4m)	24-28	70-85	65-75
1/8"(3.2m)	26-30	85-110	80-90
5/32"(4.0m)	28-32	110-140	-
3/16"(4.8m)	28-32	120-160	-

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