



NICHIA WELDING ELECTRODES

NS-308

For Welding of 18%Cr-8%Ni Stainless Steel

Applications

Welding of AISI304, AISI301 and AISI302 stainless steel.

Redrying Conditions

150 ~ 200°C x 0.5 ~ 1 hr

Classification : JIS Z3221 D308-16

AWS A5.4 E308-16

Identification : Yellow Tip

Type of Covering : Lime Titania

Typical Chemical Composition of Weld Metal (%)

C	Si	Mn	P	S	Ni	Cr
0.07	0.26	1.89	0.023	0.010	10.05	19.86

Mechanical properties of all Weld Metal

Tensile Strength (Mpa)	Elongation
599	48.7%

Recommended Currents: Amp. (AC, DC-EP)

Size (mm)	Dia.	1.6	2.0	2.6	3.2	4.0	5.0
	Length	250	250	300	350	350	350
Current Range	F, H, HF	15 ~ 40	20 ~ 50	50 ~ 80	70 ~ 110	100 ~ 150	130 ~ 180
	VU, OH	10 ~ 35	15 ~ 45	45 ~ 75	65 ~ 105	95 ~ 140	~
Order No		2162030816	2162030820	2162030826	2162030832	2162030840	2162030850

NS-309

For Welding of 22%Cr-12%Ni Stainless Steel

Applications

Welding of AISI309S stainless steel.

It is also suitable for joining of dissimilar-metal such as 18% Cr - 8% Ni stainless steel to ferritic steel, and welding of clad surface of stainless steel.

Can also be used for underlaying on ferritic steel for surfacing

Redrying Conditions

150 ~ 200°C x 0.5 ~ 1 hr

Classification : JIS Z3221 D309-16

AWS A5.4 E309-16

Identification : Black Tip

Type of Covering : Lime Titania

Typical Chemical Composition of Weld Metal (%)

C	Si	Mn	P	S	Ni	Cr
0.08	0.30	1.87	0.022	0.010	12.63	24.52

Mechanical properties of all Weld Metal

Tensile Strength (Mpa)	Elongation
596	40.6%

Recommended Currents: Amp. (AC, DC-EP)

Size (mm)	Dia.	2.0	2.6	3.2	4.0	5.0
	Length	250	300	350	350	350
Current Range	F, H, HF	20 ~ 50	50 ~ 80	70 ~ 110	100 ~ 150	130 ~ 180
	VU, OH	15 ~ 45	45 ~ 75	65 ~ 105	95 ~ 140	~
Order No		2162030920	2162030926	2162030932	2162030940	2162030950

NS-310

For Welding of 25%Cr-20%Ni Stainless Steel

Applications

Welding of AISI310S stainless steel.

Welding on the clad side of stainless steel.

Welding of dissimilar-metal such as ferritic steel to air hardening steel. (Cr-Mo steel etc).

Redrying Conditions

150 ~ 200°C x 0.5 ~ 1 hr

Classification : JIS Z3221 D310-16

AWS A5.4 E310-16

Identification : Pink Tip

Type of Covering : Lime Titania

Typical Chemical Composition of Weld Metal (%)

C	Si	Mn	P	S	Ni	Cr
0.12	0.35	1.92	0.019	0.010	20.96	26.95

Mechanical properties of all Weld Metal

Tensile Strength (Mpa)	Elongation
586	41.0%

Recommended Currents: Amp. (AC, DC-EP)

Size (mm)	Dia.	2.0	2.6	3.2	4.0	5.0
	Length	250	300	350	350	350
Current Range	F, H, HF	20 ~ 50	50 ~ 80	70 ~ 110	100 ~ 150	130 ~ 180
	VU, OH	15 ~ 45	45 ~ 75	65 ~ 105	95 ~ 140	~
Order No		2162031020	2162031026	2162031032	2162031040	2162031050



NICHIA WELDING ELECTRODES

NS-312

For Joining of Dissimilar-Steel

Applications

Welding of dissimilar-metal such as stainless steel to ferritic steel or special steel.
Underlying build-up of hard surfacing.

Redrying Conditions

150 ~ 200°C x 0.5 ~ 1 hr

Classification : JIS Z3221 D312-16

AWS A5.4 E312-16

Identification : Silver Tip

Type of Covering : Lime Titania

Typical Chemical Composition of Weld Metal (%)

C	Si	Mn	P	S	Ni	Cr
0.07	0.26	1.89	0.023	0.010	10.05	19.86

Mechanical properties of all Weld Metal

Tensile Strength (Mpa)	Elongation
599	48.7%

Recommended Currents: Amp. (AC, DC-EP)

Size (mm)	Dia.	2.6	3.2	4.0	5.0
	Length	300	350	350	350
Current Range	F, H, HF	50 ~ 80	70 ~ 110	100 ~ 150	130 ~ 180
	VU, OH	45 ~ 75	65 ~ 105	95 ~ 140	~
Order No		2162031226	2162031232	2162031240	2162031250

NS-316L

For Low Carbon 18%Cr-12%Ni-2.5%Mo Stainless Steel

Applications

Welding of AISI316L stainless steel.

Redrying Conditions

150 ~ 200°C x 0.5 ~ 1 hr

Classification : JIS Z3221 D316L-16

AWS A5.4 E316L-16

Identification : Green Tip

Type of Covering : Lime Titania

Typical Chemical Composition of Weld Metal (%)

C	Si	Mn	P	S	Ni	Cr	Mo
0.032	0.23	1.80	0.024	0.011	13.00	18.85	2.35

Mechanical properties of all Weld Metal

Tensile Strength (Mpa)	Elongation
565	41.8%

Recommended Currents: Amp. (AC, DC-EP)

Size (mm)	Dia.	2.0	2.6	3.2	4.0	5.0
	Length	250	300	350	350	350
Current Range	F, H, HF	20 ~ 50	50 ~ 80	70 ~ 110	100 ~ 150	130 ~ 180
	VU, OH	15 ~ 45	45 ~ 75	65 ~ 105	95 ~ 140	~
Order No		2162031620	2162031626	2162031632	2162031640	2162031650

NS-347

For 18%Cr-9%Ni-Nb, 18%Cr-8%Ni-Ti Stainless Steel

Applications

Welding of AISI347 and AISI321, AISI304L stainless steel.

Redrying Conditions

150 ~ 200°C x 0.5 ~ 1 hr

Classification : JIS Z3221 D347-16

AWS A5.4 E347-16

Identification : Dark Blue Tip

Type of Covering : Lime Titania

Typical Chemical Composition of Weld Metal (%)

C	Si	Mn	P	S	Ni	Cr	Nb+Ta
0.06	0.32	1.89	0.020	0.011	9.92	19.85	0.68

Mechanical properties of all Weld Metal

Tensile Strength (Mpa)	Elongation
652	38.3%

Recommended Currents: Amp. (AC, DC-EP)

Size (mm)	Dia.	3.2	4.0	5.0
	Length	350	350	350
Current Range	F, H, HF	70 ~ 110	100 ~ 150	130 ~ 180
	VU, OH	65 ~ 105	95 ~ 140	~
Order No		2162034732	2162034740	2162034750