

GEMET 821N

IDENTIFICATION: Gemet 821N ENiCrFe3

DESCRIPTION: A versatile non-synthetic electrode for welding of Inconel 600 and similar composition alloys.

SPECIFICATIONS: AWS SFA 5.11: ENiCrFe3, CEN ENi6182 NiCr15Fe6MnB12
Werkstoff no 2.4807

CHARACTERISTICS:

Medium heavy coated, basic type all- position electrode manufactured by using inconel core wire intended for welding Inconel 600 and similar composition alloys. The deposit tolerates high dilution levels and is very resistant to hot cracking. It is not susceptible to sigma phase embrittlement or carbon migration and is therefore ideal for service at elevated temperatures. The weld metal passes X-ray quality.

Weld Metal Composition (%)

C	Cr	Mn	Si	S	P
0.08 max	13.0-17.0	5.0-9.5	0.90 max	0.015 max	0.03 max
Nb+Ta		Cu	Fe	Ti	Ni
1.0-2.5		0.50 max	10.0 max	1.0 max	59.0 min

Mechanical Properties of Weld Metal

UTS (MPa)	YS (MPa)	ELN (%) (L=4D)	CVN Impact	
			Temp	Joules
550-690	360-510	30-45	-196°C	60-120

Bend Test: Satisfactory

APPLICATIONS:

- Suitable for dissimilar joining combination between nickel-base alloys, monel, mild and low alloy steels and austenitic stainless steels.
- Can be used to clad carbon steel with inconel type surface.
- For welding 5 % and 9 % nickel steel for cryogenic applications.
- For welding Inconel 600 and similar composition alloys.

FERRITE CONTENT: FN-O (WRC-92)

CORROSION RESISTANCE:

Extremely good resistance to general and intergranular corrosion and very good resistance to stress corrosion cracking.

HIGH TEMPERATURE PROPERTIES:

Resistance to oxidation in air upto 1150°C, in sulphur dioxide upto 800°C.

RECOMMENDED CURRENT AND PACKING DATA:

SIZE (mm)	LENGTH (mm)	AMPS DC(+)	PACKING/CARTON (KG.)
2.50	300	60 - 80	2 x 5 = 10
3.15/3.20	350	70 - 110	2 x 5 = 10
4.00	350	100 - 155	2 x 5 = 10
5.00	350	150 - 200	2 x 5 = 10

Manufactured by: GEE LIMITED

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