

GEMET 823N

IDENTIFICATION

Gemet 823N, ENiCrFe-1

CLASSIFICATION

AWS A 5.11 ENiCrFe1

DESCRIPTION

Medium heavy coated, basic type all- position electrode manufactured by using inconel core wire intended for welding 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 ANALYSIS (RANGE) %

| C | Cr | Mn | Si | Cu | Fe | Ni | S | P | Nb + Ta |
|-------------|----------------|------------|-------------|------------|-----------|-----------|--------------|-------------|-----------|
| 0.08 Max | 13.0 - 17.0 | 3.5 max | 0.75 max | 0.5 max | 11 max | 62 min | 0.015 max | 0.03 max | 1.5 - 4.0 |

MECHANICAL PROPERTIES (RANGE)

| TS (MPa) | YS (MPa) | EL. (%) (L=4D) |
|---------------------------------|-----------|----------------|
| 550 - 690 | 360 - 510 | 30 - 45 |
| Bend Test : Satisfactory | | |

TYPICAL APPLICATIONS

- Suitable for dissimilar joining combination between nickel-base alloys, mild and low alloy steels and austenitic stainless steels.
- Can be used to clad carbon steel with inconel type surface.
- For cryogenic applications.
- For joining nickel to nickel base alloys.

CORROSION RESISTANCE :

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

PACKING PARAMETERS

| Size (mm) | Length (mm) | Current Condition Amps DC (+) | Packing / Packet (kg) | Packing / Box (kg) |
|-------------|-------------|-------------------------------|-----------------------|--------------------|
| 2.5 | 350 | 60 - 80 | 2 | 2 x 5 = 10 |
| 3.15 / 3.20 | 350 | 70 - 110 | 2 | 2 x 5 = 10 |
| 4 | 350 | 100 - 155 | 2 | 2 x 5 = 10 |
| 5 | 350 | 150 - 200 | 2 | 2 x 5 = 10 |