

# GM 821

## IDENTIFICATION

GM 821, ERNiCr3

## CLASSIFICATION

AWS/SFA 5.14: ERNiCr3, BS 2901-90 NA 35,  
DIN 1736- 85WSGNiCr2ONb Worst-off no 2.4806

## DESCRIPTION

GM 821 is 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.

## CHEMICAL ANALYSIS (RANGE) %

C	Cr	Mn	Si	S	P	Ti	Cu	Fe	Nb + Ta	Ni
0.1 max	18.0 - 22.0	2.5 - 3.5	0.5 max	0.015 max	0.03 max	0.75 max	0.5 max	3 max	2.0 - 3.0	67 min

## MECHANICAL PROPERTIES (RANGE)

TS (N/mm <sup>2</sup> )	YS (N/mm <sup>2</sup> )	EL (%) (L=4D)	CVN Impact Value	
			Temp	Joules
550 - 690	360 - 510	30 - 45	-196°C	60 - 120

## TYPICAL 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 0

**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. In Hydrogen Sulphide up to 550°C.

**SHIELDING GAS :** Ar 99.99% , 16-21 l/min ; Ar +30% He, 20-25 l/min

## PACKING PARAMETERS

Size (mm)	Weight / Spool (kg)
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0.8	15
1.2	15
1.6	15