



# ER NiFeCr-1 (ALLOY 825)

Nickel Alloy WIRE/GTAW



## Standards

EN/ISO-Standard - 18274

EN/ISO-Classification - S Ni 8065 - NiFe30Cr21Mo3

AWS-Standard - A5.14

AWS-Classification - ER NiFeCr-1

## Features and Applications

- Alloy 825 is a nickel-iron-chromium wire making this a suitable choice for a variety of difficult applications.
- This wire provides high levels of corrosion resistance to both moderately oxidising and reducing environments.
- Perfect for overlay cladding where similar chemical composition is required.
- Excellent weldability with fully austenitic weld metal with high resistance against stress corrosion cracking in media containing chloride ions.
- Typically used in the chemical processing industries, petrochemical, paper manufacturing and power generation etc.
- **Test Certificates can be found online @wilkinsonstar247.com**



## Typical Base Materials

G-X7NiCrMoCuNb 25 20, X1NiCrMoCuN25 20 6, X1NiCrMoCuN25 20 5, NiCr21Mo, X1NiCrMoCu 31 27 4, N08926, N08904, ALLOY 825, N08028, UNS N08825 W.Nr: 1.4500, 1.4529, 1.4539 (904L), 2.4858, 1.4563, 1.4465, 1.4577 (310Mo), 1.4133, 1.4500, 1.4503, 1.4505, 1.4506, 1.4531, 1.4536, 1.4585, 1.4586\*

\* Illustrative, not exhaustive list

## Welding Positions

EN ISO 6947 - PA, PB, PC, PD, PE, PF, PG

## Shielding Gases

EN ISO 14175 - TIG: I1 (Argon)

## Polarity

DC (-)

## Chemical Composition % (Range)

| C %  | Mn % | Fe %  | P %   | S %   | Si % | Cu % | Ni %  | Al % | Ti % | Cr %  | Mo % |
|------|------|-------|-------|-------|------|------|-------|------|------|-------|------|
| max  | 0.70 | 22.00 | max   | max   | max  | 2.30 | 43.00 | max  | 1.00 | 22.00 | 3.00 |
| 0.05 | 0.90 | min   | 0.020 | 0.004 | 0.50 | 3.00 | 46.00 | 0.20 | 1.20 | 23.50 | 3.50 |

## Packaging Data

| Part No.   | Diameter Ø (mm) | Package Length (mm) | Package Weight (Kg) | Package Type   |
|------------|-----------------|---------------------|---------------------|----------------|
| 6011100608 | 1.60            | 1000                | 5                   | Cardboard Tube |
| 6011100609 | 2.40            | 1000                | 5                   | Cardboard Tube |
| 6011100610 | 3.20            | 1000                | 5                   | Cardboard Tube |

## Mechanical Properties

| Tensile Strength (N/mm <sup>2</sup> ) | Yield Strength (N/mm <sup>2</sup> ) | Elongation (%) | Impact Strength (J) |
|---------------------------------------|-------------------------------------|----------------|---------------------|
| ≥550                                  | -                                   | -              | -                   |

Mechanical properties are approximate and may vary based on the heat, shielding gas, welding parameters and other factors.