

## 20.70.Nb

MIG (GMAW)

## SOLID WIRE FOR MIG

## PRODUCT DESCRIPTION

Solid wires for MIG welding of nickel base alloys and dissimilar joints between nickel alloys, ferritic and austenitic stainless steels.

## CLASSIFICATIONS

AWS A5.14M      ERNiCr-3  
ISO 18274      S Ni 6082  
UNS      N06082

Also known generically as filler metal 82 (FM82)

## ASME IX QUALIFICATION

QW432      F-No 43

## CHEMICAL COMPOSITION (WIRE WT %)

|         | C    | Mn  | Si   | S     | P     | Cr   | Ni  | Nb  | Cu   | Ti  | Fe  |
|---------|------|-----|------|-------|-------|------|-----|-----|------|-----|-----|
| min.    | --   | 2.5 | --   | --    | --    | 18.0 | 670 | 2.0 | --   | --  | --  |
| max.    | 0.05 | 3.5 | 0.50 | 0.015 | 0.020 | 22.0 | bal | 3.0 | 0.50 | 0.7 | 3.0 |
| Typical | 0.02 | 3   | 0.1  | 0.005 | 0.01  | 20   | 73  | 2.5 | 0.01 | 0.4 | 1   |

## ALL-WELD MECHANICAL PROPERTIES

|                           |      |
|---------------------------|------|
| Typical values as welded  | RT   |
| Tensile strength [MPa]    | 640  |
| 0.2% proof strength [MPa] | 390  |
| Elongation [%] 4d         | 35   |
| Reduction of area [%]     | 50   |
| Impact ISO-V[U] -196°C    | > 60 |

## TYPICAL OPERATING PARAMETERS

| Shielding gas | Current | Diameter (mm) | Parameters |
|---------------|---------|---------------|------------|
| Argon         | Pulsed  | 1.2           | 180A, 26V  |

## PACKAGING DATA

| Diameter (mm) | Weight (kg) | Packaging | Item number |
|---------------|-------------|-----------|-------------|
| 0.8           | 15          | S300      | M2070NB-08  |
| 0.9           | 15          | S300      | M2070NB-09  |
| 1.0           | 15          | S300      | M2070NB-10  |
| 1.2           | 15          | S100      | M2070NB-12  |

## FUME DATA (WT % TYPICAL)

| Fe | Mn | Cr3 | Ni | Mo    | Cu    | OES (mg/m³) |
|----|----|-----|----|-------|-------|-------------|
| 1  | 6  | 15  | 56 | < 0.1 | < 0.5 | 0.9         |