

# Ni-Cr-Fe Welding Electrode

## INCONEL<sup>®</sup> Welding Electrode 152M

**INCONEL Welding Electrode 152M** is used for the shielded-metal-arc welding of INCONEL alloy 690, and the overlaying of carbon steels and stainless steels to provide a nickel-chromium alloy corrosion resistant surface. The high chromium level provides excellent resistance to stress corrosion cracking in the nuclear, pure water environment. The product can also be used in applications requiring resistance to oxidizing acids. It is useful for dissimilar joints involving INCONEL and INCOLOY alloys. This product contains Boron and Zirconium to minimize the tendency for ductility-dip cracking.

### Specifications

AWS A5.11 ENiCrFe-7 (UNS W86152)  
Other specifications to follow.

### Approvals

Please confirm details of current scope of approvals with the Technical Department prior to order placement.

| Limiting<br>Chemical<br>Composition | Ni .....Remainder |             | Co .....0.12 max. |            |
|-------------------------------------|-------------------|-------------|-------------------|------------|
|                                     | C.....            | 0.05 max.   | Nb.....           | 1.0 to 2.5 |
| Mn.....                             | 5.0 max.          | P.....      | 0.03 max.         |            |
| Fe.....                             | 7.0 to 12.0       | Zr.....     | 0.02 max.         |            |
| S.....                              | 0.015 max.        | B.....      | 0.005 max.        |            |
| Si.....                             | 0.75 max.         | Mo.....     | 0.50 max.         |            |
| Cu.....                             | 0.50 max.         | Others..... | 0.50 max.         |            |
| Cr.....                             | 28.0 to 31.5      |             |                   |            |

| Minimum<br>Mechanical<br>Properties | Tensile Strength, psi |     | 80,000 |
|-------------------------------------|-----------------------|-----|--------|
|                                     |                       | MPa | 552    |
|                                     | Elongation, (4d) %    | 30  |        |

### Available Product Forms – Supplied in 10lbs (4.54kg) hermetically sealed containers

| Diameter      | mm<br>in | 2.4<br>3/32 | 3.2<br>1/8 | 4.0<br>5/32 | 4.8<br>3/16 |
|---------------|----------|-------------|------------|-------------|-------------|
| Length        | mm<br>in | 229<br>12   | 356<br>14  | 356<br>14   | 356<br>14   |
| Current (DC+) | A        | 45-70       | 75-110     | 95-140      | 125-165     |

