



## INCONEL<sup>®</sup> Filler Metal 52MSS

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**INCONEL Filler Metal 52MSS** is the third generation 30% chromium INCONEL<sup>®</sup> welding product designed to resist nuclear pure water intergranular stress corrosion cracking. The addition of 4% molybdenum and an increased level of niobium up to 2.5% brings INCONEL<sup>®</sup> Filler Metal 52MSS excellent resistance to ductility-dip cracking (DDC) or cold cracking during fabrication. Because of the low levels of aluminum and titanium, it provides remarkably "clean" weld deposits that tend to be free of inclusions, oxides, and porosity. INCONEL<sup>®</sup> Filler Metal 52MSS is used for fabrication and repair of nuclear components and also exhibits good resistance to root-cracking. The good wetting and clean welds make INCONEL<sup>®</sup> Filler Metal 52MSS ideal for remote-controlled multi-pass welds in radioactively "hot" repair situations.

### Specifications

AWS A5.14 ERNiCrFe-13 (UNS N06695)

ASME II, Part C, SFA-5.14, ERNiCrFe-13 (UNS N06695)

ASME IX, F-No.43

\*Supply to these specifications available upon request

For manufacture to ASME III (NCA3800, NB2400), and other specifications

please refer your inquiry to the Technical Department prior to order placement.

### Approvals

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

### Limiting Chemical Composition

|            |            |             |           |
|------------|------------|-------------|-----------|
| Ni+Co..... | 54.0-62.0  | Cr.....     | 28.0-31.5 |
| C.....     | 0.03 max.  | Ti.....     | 0.50 max  |
| Mn.....    | 1.0 max.   | Al.....     | 0.50 max  |
| Fe.....    | balance    | P.....      | 0.02 max. |
| S.....     | 0.015 max. | Nb+Ta.....  | 1.5 - 3.5 |
| Si.....    | 0.50 max.  | Al+Ti.....  | 1.5 max.  |
| Mo.....    | 3.0 - 5.0. | Others..... | 0.50 max. |
| Cu.....    | 0.30 max.  |             |           |

### Minimum Mechanical Properties

|                       |        |
|-----------------------|--------|
| Tensile Strength, psi | 94,000 |
| MPa                   | 650    |
| Elongation, (4d) %    | 40     |

Filler metals available on spool and in cut straight lengths in a variety of sizes selected from the following diameters:

### Available Product Forms

| mm<br>in | 0.8<br>0.030 | 0.9<br>0.035 | 1.0<br>0.040 | 1.14<br>0.045 | 1.2<br>0.047 | 1.6<br>0.062 | 2.4<br>0.093 | 3.2<br>0.125 |
|----------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|
|----------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|

Straight length – 915mm (36 in) or 1000mm (39 in); Spool weight-13.6 kg (30lb)  
Other European spools sizes EN759 – S100, S200, S300, BS300, S350