

## Masterweld NiCrFe3

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■ **Description & Applications:**

Superior electrode for joining and overlaying almost any nickel chrome alloy for service in both cryogenic and high temperature conditions, with the emphasis on the cryogenic side. For welding Inconel 600 and 601 type alloys, Incoloy 800 and 800H, involved in temperatures up to 540°C and for dissimilar applications such as Incoloy 600 and 800HT to carbon or stainless steels; nickel 200 or monel 400 and nimonic 75. Also suitable for welding 3%, 5% nickel semi cryogenic steels and 9% nickel steels for full cryogenic conditions: Used extensively in the nuclear, chemical and petrochemical industries.

■ **Related Specification:**

AWS A5.11 E NiCrFe3  
EN 14172 ENi6182

■ **Typical All Weld Metal Chemical Analysis %:**

| C    | Mn   | Fe   | P     | S     | Si   | Ni | Cr | Nb   | Ti   |
|------|------|------|-------|-------|------|----|----|------|------|
| 0.02 | 7.50 | 7.00 | 0.009 | 0.005 | 0.62 | 68 | 15 | 1.50 | 0.11 |

■ **Typical All Weld Metal Mechanical Properties:**

**As Welded**

|                           |                       |
|---------------------------|-----------------------|
| Ultimate Tensile Strength | 660 N/mm <sup>2</sup> |
| 0.2% Proof Stress         | 390 N/mm <sup>2</sup> |
| Elongation on 4d          | 40%                   |
| Reduction of Area         | 45%                   |
| Impact energy -196° C     | 150 J                 |
| Hardness                  | As deposited 190 HV   |

■ **Current:**

AC (Min 70 OCV) DC (+/-)

■ **Sizes Available and Recommended Amperages:**

|       |        |         |         |
|-------|--------|---------|---------|
| 2.5mm | 3.2mm  | 4.0mm   | 5.00mm  |
| 60-90 | 80-120 | 100-150 | 130-200 |

■ **Storage:**

If allowed to become damp the electrodes should be re-dried for one hour at 180°C before use. If allowed to become wet re-dry at 320°C for one hour.

Manufactured under an ISO 9001 registered quality management system.

