



MAC NICRO E224Nb

■ **Description & Applications:**

Manufactured on a predominantly alloyed core wire with a concentrically extruded chemically basic flux coating. Mainly used for welding muffles and radiant tubes, heat treatment trays and baskets, reformer furnace outlet manifolds, ethylene plant transfer lines and many aspects of the nuclear engineering industry. The electrode provides resistance to corrosion, thermal fatigues and shock at temperatures up to 1000°C. This electrode has been designed to match the composition and properties of type 800 alloys in the wrought and cast form. Typical proprietary alloys include :

<u>PROPRIETARY ALLOYS</u>	<u>BS</u>	<u>ASTM-ASME</u>	<u>DIN</u>
Inconel 800, 800H, 800HT			
Sandvik Sanicro 31	NA15	UNS08800	1.4850
VDM Nicrofer3220, 3220H	NA15H	UNS08810	1.4876
Cast : Termally T52 (Lloyds)		UNS08811	
Vicro 8 (Firth Vickers)			
Paralloy CR32W (Paralloy)			

■ **Related Specification:**

Mac Nicro E224Nb is a 20.32.Nb and is not covered by any national specification. However it is similarly alloyed to base material such as the 800 and 800H alloys.

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

C	Mn	Si	S	P	Cr	Ni	Nb	Mo
0.1	2.0	0.3	0.01	0.015	21	32	1.3	0.4

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

<u>As Welded</u>	<u>Min</u>	<u>Typical</u>
Ultimate Tensile Strength	520 N/mm ²	600 N/mm ²
0.2% Proof Stress	210 N/mm ²	390 N/mm ²
Elongation on 4d	30%	38%
Reduction of area		48%
Impact energy +20°C		55 J
Hardness HV40		170-220

■ **Current:**

DC (+)

■ **Sizes Available and Recommended Amperages:**

2.50mm	3.25mm	4.00mm
60-90	70-120	100-160

■ **Storage:**

If allowed to become damp the electrodes should be re-dried for one hour at 250°C before use.