

<b>Technical data sheet</b>  <small>011121MBA</small>	<b>Nickel base filler metal – Solid wire</b>  <b>WA TNI/MNI 625</b>	
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### CLASSIFICATION

ASME IIC SFA 5.14 / AWS A 5.14:	ERNiCrMo-3
EN ISO 18274:	S Ni 6625 (NiCr22Mo9Nb)
UNS Number:	N06625
Equivalent Material number:	2.4831
ASME IX Qualification	QW432 F-N° 43

### DESCRIPTION

- GTAW rod / GMAW nickel base solid wire
- Weld deposit composition designed to match the nickel base alloy 625
- High chromium and molybdenum contents combined with ultra-low iron content allow excellent resistance to various corrosion forms
- High strength and good thermal stability over a broad temperature range

### APPLICATIONS

- Welding NiCrMo alloys.
- Dissimilar weldments between nickel base alloys and stainless steels, including superaustenitic stainless steels.
- Cladding and weld overlay
- WA TNI/MNI 625 are used for corrosion resistant weld overlays at service temperatures ranging from cryogenic to 1000°C. The weld metal has good resistance to stress corrosion cracking in chloride bearing media.

#### Examples:

Alloy	UNS	EN Symbol	Material number
625	N06625	NiCr22Mo9Nb	2.4856
825	N08825	NiCr21Mo	2.4858
6% Mo super austenitics	N08028	X1 NiCrMoCu 31 27 4	1.4563
	N08031	X1 NiCrMoCu 32 28 7	1.4562
	N08926	X1 NiCrMoCuN 25 20 6	1.4529
9% Ni steel	K81340	X8Ni9	1.5662

### TYPICAL WIRE ANALYSIS (weight %)

C	Mn	Si	Cr	Mo	Fe	Nb	Ti	S	P	Al	Ni
0.02	0.05	0.05	22	9	0.2	3.6	0.2	0.004	0.004	0.1	Bal.

Weld metal microstructure: solid-solution strengthened high nickel austenite


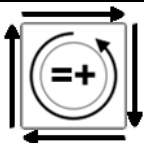
### MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES (GMAW)

Rm [MPa]	Rp0.2% [MPa]	A <sub>5</sub> [%]	CVN [J]
690	420	22	-196°C: 47

### TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES (GMAW)

Rm [MPa]	Rp0.2% [MPa]	A <sub>5</sub> [%]	CVN [J]
780	520	40	-196°C: 60

### SHIELDING GAS – OPERATING CONDITIONS – WELDING POSITIONS

GTAW		GMAW	
Shielding gas according to EN ISO 14175	Welding positions Current type	Shielding gas according to EN ISO 14175	Welding positions Current type
I1 (100 % argon)		M12 mixed gas (Ar + 10-30% He + 0.5% CO <sub>2</sub> ) I1 (100 % argon)	

### PACKAGING

Spools	Ø mm	0.8	1.0	1.2	1.6
Rods	Ø x1000 mm	1.6	2.0	2.4	3.2

Other diameters are available on request.

Welding products and techniques evolve constantly. All descriptions, illustrations and properties given in this data sheet are subject to change without notice and can only be considered as suitable for general guidance. This document is intended to help the user make the correct choice of product. It is his responsibility to assess its suitability for his intended application.