Technical data sheet 011121MBA	Nickel base filler metal – Solid wire # WA TNI/MNI 82	Welding Alloys

CLASSIFICATION

ASME IIC SFA 5.14 / AWS A 5.14:	ERNiCr-3
EN ISO 18274:	S Ni 6082 (NiCr20Mn3Nb)
UNS Number:	N06082
Equivalent Material number:	2.4806
ASME IX Qualification	QW432 F-N° 43

DESCRIPTION

- GTAW rod / GMAW nickel base solid wire
- Well-suited for dissimilar welding of stainless and nickel base alloys to mild steels.
- Ideal for joining creep resistance steels to stainless steels, where the high nickel content will minimize the carbon diffusion from the mild steel into the stainless material.
- Heat and high temperature resistant.
- Excellent mechanical properties with high hot cracking resistance.
- Good toughness at sub-zero temperatures.

APPLICATIONS

- WA TNI/MNI 82 are suitable for welding and cladding nickel-based alloys such as alloy 600 or similar materials.
- They are used for dissimilar welding of most nickel-based alloys to each other, to alloyed steels, or to stainless steels.
- WA TNI/MNI 82 can be used up to service temperatures of 900°C.
- They are first choice consumables for heterogeneous weldments between creep-resisting ferritic steels and austenitic steels for use at high temperatures. If necessary, such joints may be stress relieved
- Repair welding on “hard-to-weld” steels

Examples:

Alloy	UNS	EN Symbol	Material number
600	N06600	NiCr15Fe	2.4816
800	N08800	X10 NiCrAlTi 32-21	1.4876
800H	N08810	X10 NiCrAlTi 32-21	1.4876
800HT	N08811	X8 NiCrAlTi 32-21	1.4959
330	N08330	X12 NiCrSi 36-16	1.4864

TYPICAL ALL-WELD METAL ANALYSIS (weight %)

C	Mn	Si	Cr	Fe	Nb	Cu	Ti	P	S	Ni
0.02	3.0	0.2	20	1.0	2.5	0.1	0.4	0.01	0.005	Bal.

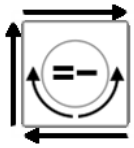
MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES (GMAW)

Rm [MPa]	Rp0.2% [MPa]	A_5 [%]	CVN [J]
600	360	25	-196°C: 47

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES (GMAW)

Rm [MPa]	Rp0.2% [MPa]	A_5 [%]	CVN [J]
650	380	38	-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_2) 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