

NOVOFIL NI1

MIG/MAG welding wire for low alloy steels

MIG/MAG

ER80S-Ni1

DESCRIPTION

Low alloy copper-coated solid wire designed for welding low alloy steels with 1% Ni content and fine grained steels for low temperature applications (-50°C). Nickel increases atmospheric weathering resistance and improves the electrochemical balance between weld and base metal. Suitable for the construction of offshore platforms, pressure vessels and pipelines. To be used under the shield of $\text{Ar} + \text{CO}_2$.

CLASSIFICATION

AWS A5.28: ER80S-Ni1

EN ISO 14341-A: G 46 5 M21 3Ni1

COATING TYPE

Copper coated

Bronze coated

Copper free

APPROVALS

CE

SHIELDING GASES

M21: $\text{Ar} + 15\text{--}25\% \text{CO}_2$

C1: 100% CO_2

DIAMETERS

0.80

mm · .030 in

0.90

mm · .035 in

1.00

mm · .039 in

1.20

mm · .045 in

1.60

mm · .062 in

PACKAGING

ø mm	0.60	0.80	0.90	1.00	1.20	1.60
Spool	–	✓	✓	✓	✓	✓
Drum	–	✓	✓	✓	✓	✓

Spool weight: **15 kg – 16 kg – 18 kg**

Drum weight: **250 kg – 300 kg – 450 kg**

WELDING POSITIONS



PA

flat



PB

horizontal-vertical



PC

horizontal



PE

overhead



PF

vertical up



PG

vertical down

CHEMICAL ANALYSIS OF THE WIRE [%]

	C	Mn	Si	Cr	Mo	Cu
Value	0.09	1.2	0.65	< 0.15	0.5	< 0.25

MECHANICAL PROPERTIES OF THE WELD METAL

	Gas M21
Yield strength Re	490 MPa
Tensile strength Rm	570 MPa
Elongation A5	25%
Impact test KV (-20 °C)	130 J
Impact test KV (-40 °C)	80 J

MATERIALS TO BE WELDED

ASTM

API 5LX42 • API 5LX46 • API 5LX52 • API 5LX60 • API 5LX65 • A 333 Gr 6 • A 334 Gr 6 • A 350 Gr LF2, LF5 • A 131 Gr A, B, D, E

EN

10113-2 S275, S355, S420 • 10025 S275, S355 • 10208-1 L290 GA, L360 GA • 10208-2 L290, L360, L415 • 10113-3 S274, S355, S420