

NOVOFIL CORTEN

MIG/MAG welding wire for low alloy steels

MIG/MAG

ER80S-G · G MoSi

DESCRIPTION

It is a low alloyed MIG/MAG wire, used for welding creep resistant 0.5% Mo steels and fine grained steels. It gives a weld metal that is used in operating temperatures between -40°C and 500°C . It is used in the welding of steel construction applications, boiler and pressure vessels, gas pipes and turbine rotors.

Industry: Ship building, heavy machinery, petro-chemical, power generation, metal fabrication industry.

CLASSIFICATION

AWS A5.28: ER80S-G

EN ISO 14341-A: G 45 2 M21 0 / G 46 2 M21 Z

EN ISO 21952-A: G MoSi

COATING TYPE

Copper coated

Bronze coated

Copper free

APPROVALS

CE

SHIELDING GASES

M21: Ar + 15-25% CO₂

C1: 100% CO₂

WELDING POSITIONS



PA

flat



PB

horizontal-vertical



PC

horizontal



PE

overhead



PF

vertical up



PG

vertical down

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**

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	530 MPa
Tensile strength Rm	640 MPa
Elongation A5	26%
Impact test KV (-20 °C)	90 J
Impact test KV (+20 °C)	150 J

MATERIALS TO BE WELDED

Fine grained steels

DIN: StE 255 – StE 460 • EN: S255N – S460N • DIN: WStE 255 – WStE 460 • EN: P255NH – P460NH • EN: S275ML; S355M – S420M

Pipe materials

DIN: StE 320.7 – StE 415.7 • EN: L320 – L415NB • DIN: StE 360.7 TM – StE 480.7 TM • EN: L360MB – L485MB • DIN: X52, X56, X60, X65 (API 5LX)

Boiler & pressure vessel steels

DIN: 15Mo3, 17Mn4, 19Mn6 • EN: 16Mo3, P295GH, P310GH • DIN: 22Mo4, 20MnMoNi55

Elevated temperature steels

DIN: St 35.8 – St 45.8 • EN: P235G1TH – P255G1TH

Cast steels

DIN: GS-45, GS-52, GS-60 • EN: GE240, GE260, GE300 • EN: G20Mo5

Creep resistant steels

DIN: 17MnMoV6-4, 15NiCuMoNb5 • EN: 20MnMoNi4-5