

## DESCRIPTION

### Low alloy solid wire for high yield strength steels

Low-alloy copper-coated solid wire rod with Ni-Cr-Mo additions designed for welding high yield strength steels and with tensile strength higher than 700 MPa. Good impact strength at low temperatures. Suitable for the metal working industry, offshore fabrication, chemical and petrochemical industry. It also has applications in fabrications of high strength low-alloy steels, which may be used for industrial machinery construction, cranes and other highly stressed structural components.

## SPECIFICATIONS

ISO 16834-A	W 62 4 Mn3NiCrMo	AWS A5.28	ER100S-G
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	11
Positions	PA, PB, PC, PD, PE, PF	Current	DC-

## ASME QUALIFICATIONS

F-No (QW432)	6
A-No (QW442)	10

## FERRITE

Ferrite	-
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## PREN

PREN	-
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## HARDNESS

Hardness	-
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## CHEM. COMP. %

	DEFAULT
C	0.09
Mn	1.5
Ni	0.55
Cr	0.4
P	0.01
S	0.007
Mo	0.22
Si	0.7
Cu	0.14

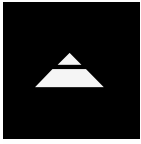
## MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength $R_m$ MPa	700	720
Yield strength $R_{p0.2}$ MPa	620	620
Elongation A ( $L_0=5d_0$ ) %	-	20
Impact Charpy ISO-V	47J @ -40°C	50J @ -40°C
Impact Charpy ISO-V	-	-

## WELDING PARAMETERS

	1.6 mm	2.4 mm
Ampere	95A - 135A	145A - 205A
Voltage	-	-
Packaging	Ø 1,2÷3,2mm	Ø 1,2÷3,2mm
Packaging Type	5kg carton tube	5kg carton tube





# 100ksi

DESCRIPTION

HIGH YIELD STRENGTH STEELS  
100ksi

## APPLICATION

Exhibiting commendable impact strength at low temperatures, this filler material is well-suited for welding high-strength low-alloy (HSLA) used in cranes and earthmoving equipment. Applications extend to offshore fabrication and the chemical and petrochemical industry, where the precise addition of micro-alloying elements ensures excellent ductility and crack resistance despite the high strength. Preheating requirements depend on the base material and thickness, often mandating a minimum preheat of 100°C. Caution is warranted with certain HSLA steels, as interpass temperatures exceeding 200°C may lead to a reduction in strength and toughness. Post-weld heat treatment (PWHT) requirements are generally dependent on the specific base material and application. This filler material's composite properties offer a blend of durability, weldability, and machinability, making it an ideal choice for manufacturing diverse mechanical components.

## ALLOY TYPE

Mn-Ni-Mo low alloy consumables for welding high strength steels with ultimate tensile strength to 690 MPa (100ksi).

## MICROSTRUCTURE

Predominantly ferrite; some will contain high proportions of acicular ferrite for optimum as welded toughness.

## MATERIALS

For joining of quenched and tempered and thermomechanically rolled fine-grained structural steels. For use in building, crane and vehicle constructions.

**EN W.Nr.:** S460, S500, S550, S620, S620Q, S620QL, S620QL1, S690Q, S690QL, S690QL1, S600MC, S650MC, S700MC, L690M, L830M.

**ASTM:** A 514 Gr. F, H, Q, A 709 Gr. 100 Type B, E, F, H, Q, A 709 Gr. HPS 100W.

**API:** 5L X65, 5L X70, 5L X80+

**PROPRIETARY:** N-A-XTRA® M 700 (ThyssenKrupp), Strenx® 700 (SSAB).

