



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	G 62 4 Mn3NiCrMo	AWS A5.28	ER100S-G
DIN	-	Werkstoff Number	-
Certifications	CE	Shielding	M20, M21
Positions	PA, PB, PC, PD, PE, PF, PG	Current	DC+

ASME QUALIFICATIONS	FERRITE	PREN	HARDNESS
F-No (QW432)	6	-	-
A-No (QW442)	10	-	-

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN	VARIANT
C	0.09	Tensile strength R _m MPa	700	720
Mn	1.5	Yield strength R _{p0.2} MPa	620	620
Ni	0.55	Elongation A (L ₀ =5d ₀) %	-	20
Cr	0.4	Impact Charpy ISO-V	47J @ -40°C	50J @ -40°C
P	0.01	Impact Charpy ISO-V	-	-
S	0.007			
Mo	0.22			
Si	0.7			
Cu	0.14			

WELDING PARAMETERS	1 mm	1.2 mm
Ampere	170A - 220A	180A - 300A
Voltage	24V - 28V	26V - 30V
Packaging	Ø 0,8÷1,6mm	Ø 0,8÷1,6mm
Packaging Type	Drums, B300, D200 and D100 spools.	Drums, B300, D200 and D100 spools.



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.



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).

