



G-TECH 109

SMAW

HIGH YIELD STRENGTH STEELS

100ksi

DESCRIPTION

Basic coated electrode for high strength low alloy steels

Basic coated electrode highly resistant to cracks and elaborated for welding fine grain steels and steels with high mechanical strength (Rm up to 800 MPa). Welds of high security, buffer layers before hardfacing. It is suitable for high strength low alloy -HSLA- constructions such as cranes and earth moving equipment . Applications include also offshore fabrication, chemical and petrochemical Industry. Regular fusion, stable arc, low spatters, good removal of the slag and nice aspect of the weld seam. Ease of slag removal reduces post-welding cleaning operations to a minimum.

SPECIFICATIONS

ISO 18275-A	E 62 5 1,5NiMo B 42	AWS A5.5	E10018-G
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	-
Positions	PA, PB, PC, PD, PE, PF	Current	DC+, AC

ASME QUALIFICATIONS

F-No (QW432)	4
A-No (QW442)	10

FERRITE

-
-

PREN

-
-

HARDNESS

-
-

CHEM. COMP. %

DEFAULT

C	0.08
Mn	1.3
Ni	1.3
Cr	0.05
P	0.01
S	0.01
Mo	0.4
Si	0.6
Cu	0.25

MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength R _m MPa	690	720
Yield strength R _{p0.2} MPa	620	620
Elongation A (L ₀ =5d ₀) %	16	18
Impact Charpy ISO-V	47J @ -50°C	47J @ -50°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS

	2.5 mm	3.2 mm	4 mm	
Ampere	70A - 90A	100A - 140A	140A - 180A	180A -
Voltage	-	-	-	-
Packaging	52 pcs/kg	21 pcs/kg	14 pcs/kg	9 pcs/kg
Packaging Type	Carton box	Carton box	Carton box	Carton box

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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.

DAIKO



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).

