

Classifications

EN ISO 14341-A	AWS A5.18 / SFA-5.18
G 46 4 M21 4Si1	ER70S-6
G 46 4 C1 4Si1	

Characteristics and typical fields of application

Solid wire electrode of type G4Si1 / ER70S-6 with optimised properties for reliable welding performance within a wide parameter range. The non coppered welding wires with the ECOspark® surface are characterised by very good feeding properties at high wire feeding rates, a very stable arc performance and significant low oxide / silicate forming on the weld surface. This makes them especially suited for fully mechanised processes with wire from BASEdrum, MEGAdrum or the sustainable ECOdrum bulk package.

Base materials

Steels with a yield strength ≤ 460 MPa (67 ksi)

S235JR-S355JR, S235JO-S355JO, S450JO, S235J2-S355J2, S275N-S460N, S275M-S460M, P235GH-P355GH, P275NL1-P460NL1, P215NL, P265NL, P355N, P285NH-P460NH, P195TR1 - P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L450QB, L245MB-L450MB, GE200-GE240,

ship building steels: A, B, D, E, A 32-E 36

ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, C; A 285 Gr. A, B, C; A 350 Gr. LF1; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 516 Gr. 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. C, E; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60, X65

Typical analysis

	C	Si	Mn
wt.-%	0.1	1.0	1.7

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R_e	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J	
	MPa	MPa	%	20°C	-40°C
u	480 (≥ 460)	620 ($\geq 530 - 680$)	26 (≥ 20)	150 (≥ 47)	80 (≥ 47)

u untreated, as welded M21, CO₂

Operating data

	Polarity	DC +	Dimension mm
	Shielding gas (EN ISO 14175)	C1	0.8
		M21	1.0
		M33	1.2
			1.6

Approvals

TÜV (19914), DB (42.132.96), CE