

Classifications

EN ISO 636-A	EN ISO 636-A	AWS A5.18 / SFA-5.18
W 2 Si	W 46 5 2Si	ER70S-3

Characteristics and typical fields of application

TIG rod for high integrity welds. The low Si-content renders this filler metal particularly also for joint welds that are subjected to enamelling or galvanising. Especially suited for root pass welding (approved at -50°C). Can be used in sour gas applications (HIC-Test acc. to NACE TM-02-84).

Base materials

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

S235J2G3 – S355J2G3, E360, P235T1-P355T1, P235G1TH, L210, L290MB, P255G1TH, P235GH, P265GH, P295GH, P310GH, P255NH, S235JRS1 – S235J4S, S355G1S – S355G3S, S255N – S385N, P255NH-P385NH, GE200-GE260

ASTM A27 a. A36 Gr. A106 Gr. A, B, C; A181 Gr. 60all; A214; A242 Gr.1-5; A266 Gr. 1, 2, 4; A283 Gr. A, B, C, D; A285 Gr. A, B, C; A299 Gr. A, B; A328; A366; A515 Gr. 60, 65, 70; A516 Gr. 55; A570 Gr. 30, 33, 36, 40, 45; A 572 Gr. 42, 50; A606 Gr. all; A607 Gr. 45; A656 Gr. 50, 60; A668 Gr. A, B; A907 Gr. 30, 33, 36, 40; A841; A851 Gr. 1, 2; A935 Gr.45; A936 Gr. 50; API 5 L Gr. B, X42-X60

Typical analysis

	C	Si	Mn
wt.-%	0.1	0.6	1.2

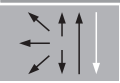
Mechanical properties of all-weld metal - typical values (min. values)

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	-20°C	-50°C
u	520 (≥ 460)	620 (≥ 530 - 680)	26 (≥ 23)	220	200	90 (≥ 47)
s	480	580	28	200	210	

u untreated, as welded - shielding gas Ar

S stress relieved, 600°C / 2 h - shielding gas Ar

Operating data

	Polarity	DC-	Dimension mm
	Shielding gas (EN ISO 14175)	I1	1.2 × 1000
	Rod marking	W2Si / ER70S-3	1.6 × 1000
			2.0 × 1000
			2.4 × 1000
			3.0 × 1000

Approvals

TÜV (01096), DB (42.132.84), Equinor, CE