

Classifications

EN ISO 14341-A	AWS A5.18 / SFA-5.18
G 42 3 M21 3Si1	ER70S-6
G 38 2 C1 3Si1	

Characteristics and typical fields of application

GMAW solid wire for non- and low-alloyed steel.

For applications in structural steel engineering, pressure vessel and ship building.

Base materials

Steels with yield strength < 420 MPa

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, P235GH-P355GH, P275NL1-P355NL1, P215NL, P265NL, P355N, P285NH-P420NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, GE200-GE240, Schiffbaustähle: 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; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60

Typical analysis

	C	Si	Mn
wt.-%	0.08	0.9	1.45

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	-30°C
u	440 (≥ 420)	530 (500 - 640)	30 (≥ 20)	160 (≥ 47)		≥ 47
u2	420 (≥ 380)	510 (470 - 600)	26 (≥ 20)	120 (≥ 47)	≥ 47	

u untreated, as welded – shielding gas M21

u2 untreated, as welded – shielding gas C1

Operating data

	Polarity	DC+	Dimension mm
	Shielding gas (EN ISO 14175)	C1 M21	0.8
			0.9
			1.0
			1.2
			1.6

Approvals

TÜV (19788), DB (42.132.89), CE