

## Classifications

EN ISO 14341-A	CSA W48-23	AWS A5.18 / SFA-5.18
G 42 4 M21 3Si1	B-G 49A 3 C1 S6	ER 70S-6
G 42 4 C1 3Si1		

## Characteristics and typical fields of application

Solid wire of type G 3Si1 / ER70S-6 for joining of mild steel with excellent welding performance. With optimized chemistry and strictly controlled raw material, combined with advanced production technologies, BÖHLER EMK 6-Ultra guarantees excellent wire feeding characteristics and arc stability for trouble free welding and less post weld cleaning. Innovative drum solutions make it the best choice for fully automated welding processes.

## Base materials

Steels with yield strength < 420 MPa (60 ksi)

S235JR-S355JR, S235J0-S355J0, 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, 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; 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.-%	0.07	0.90	1.45

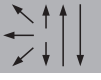
## Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R <sub>e</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact energy ISO-V KV J
	MPa	MPa	%	-40°C
u1	450 (≥ 420)	560 (≥ 500 – 640)	30 (≥ 20)	120 (≥ 75)
u2	440 (≥ 420)	540 (≥ 500 – 640)	29 (≥ 20)	120 (≥ 75)

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	
	M1		1.0
	M2		1.2
	M3		1.6

## Approvals

TÜV (20297), DB (42.132.98), CWB, DNV, LR, RINA, CE