BÖHLER SG 2

Solid wire, unalloyed

Classifications

EN ISO 14341-A	EN ISO 14341-B	AWS A5.18
G 42 3 M21 3Si1	G 49A 3 M21 S12	ER70S-6
G 42 3 C1 3Si1	G 49A 3 C1 S12	

Characteristics and typical fields of application

Copper-coated solid wire or welding rods suited for universal application in boiler and vessel fabrication and in structural steel engineering. Largely spatter-free metal transfer both when using gas mixtures and carbon dioxide. Thanks to its high current carrying capacity this filler metal is also optimally suited for welding thick-walled sheet and plate structures.

Base materials

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S235J2G3-S355J2G3, S255N-S420N, S275M-S420M, S235JRS1-S235J4S, S355G1S-S355G3S, E360, P235GH-P355GH, P255G1TH, P275NL1-P355NL1, P215NL, P265NL, P355N, P255NH-P420NH, P235T1-P355T1, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P310GH, P235G1TH, L210, L245NB-L415NB, L245MB-L415MB, GE200-GE260, 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 of solid wire (wt.-%)

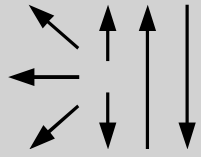
	C	Si	Mn
wt-%	0.07	0.85	1.5

Mechanical properties of all-weld metal

Condition	Yield strength R_e	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J
	MPa	MPa	%	-30°C
u	**450** (≥ 420)	**575** (500 – 640)	**30** (≥ 22)	**110** (≥ 47)
u2	**430** (≥ 420)	**555** (500 – 640)	29 (≥ 24)	**90** (≥ 47)

u untreated, as welded – shielding gas Ar + 15 – 25% CO_2
u2 untreated, as welded – shielding gas 100% CO_2

Operating data



Polarity:	Shielding gases:	ø (mm)
DC (+)	M21 (Argon + 15 – 25% CO_2)	0.8
	C1 (100% CO_2)	1.0
		1.2
		1.6

Approvals

TÜV (13009.), DB (42.236.01), ABS, CWB, CE