

Classifications

SAW solid wire				SAW flux
EN ISO 14171-A	EN ISO 14171-B	AWS A5.17	EN ISO 14174	
S2	SU22	EM12K	SA FB 1 65 DC H5	
SAW wire/flux combination				
EN ISO 14171-A	EN ISO 14171-B	AWS A5.17	AWS A5.17M	
S 38 6 FB S2	43A6 FB SU22	F7A8-EM12K (F6P6-EM12K)	F48A6-EM12K (F43P6-EM12K)	

Characteristics and typical fields of application

Universally applicable for constructional steels and fine grained steels, e.g. in shipbuilding, structural steel work, and pressure vessel fabrication. The flux reacts metallurgical Mn-neutral. The sub-arc wire/flux combination produces very good low temperature impact properties down to -60 °C. Excellent slag detachability, smooth beads, good wetting and low hydrogen contents ($\leq 5 \text{ ml}/100 \text{ g}$) are further important features. The combination is ideally suited for multi-pass welding of thick plates. For information regarding the sub-arc welding flux BÖHLER BB 24 see our detailed data sheet.

Base materials

Steels up to a yield strength of 400 MPa (56 ksi)

S235JR-S335JR, S235J2G3-S335J2G3, P235T1-P335T1, P235T2- P355T2, P235GH, P265GH, S255N, P295GH, P310GH, S235JRS1-S235J4S, S255N-S380N

ASTM A36 Gr. all; A 106 Gr. A, B A214; A 242 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; A556 Gr. B2A; A570 Gr. 30, 33, 36, 40, 45; A572 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 5L X42-X52

Typical analysis of the wire and of all-weld metal (wt.-%)

	C	Si	Mn
SAW wire wt.-%	0.11	0.12	1.1
all-weld metal %	0.07	0.25	1.2

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	%	+20 °C	-20 °C	-60 °C
u	440 (≥ 380)	520 (470 – 600)	30 (≥ 20)	185	170	90 (≥ 47)		

u untreated, as welded

Operating data

Polarity:	Redrying of sub-arc flux:	\varnothing (mm)
DC (+) / DC (-)	300 – 350 °C, 2 – 10 h	2.0 2.5 3.0 4.0

Approvals

Wire/flux combination: TÜV (7808.)

Wire: TÜV (02603.), KTA 1408.1 (8058.), DB (52.014.03), SEPROZ, CE