

SAW Basic and Semi-basic Fluxes C-Mn and low alloy steels

OP 122 is an agglomerated fluoride-basic type flux for joint welding general structural steels, pressure vessel steels, pipe steels and fine-grain steels. OP 122 has a high current-carrying capacity and is therefore also suited to welding fillets with a large throat thickness in steel constructions. The flux has an easily detachable slag. As the bulk density is low, so is the consumption rate. OP 122 can be welded on DC+ pole and AC at up to 1200 A. The special production method ensures that the flux has low moisture pick-up and the weld metal a low hydrogen content. Damp flux should be re-dried at 300-350°C. Grain size according to EN 760: 2-20.

Wire	Classification
OE-S2	AWS A5.17: F7A5-F6P5 EM 12K
OE-SD3	AWS A5.17: F7A4-F6P4 EH 12K
OE-S2Mo	AWS A5.23: F7 A2 - EA2 A2
	EN 760: SA FB 1 65 AC H5

Wire	Approvals	Grades
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Flux Analysis	
CaF ₂	20 %
Al ₂ O ₃ + MnO	25 %
CaO + MgO	30 %
SiO ₂ + TiO ₂	20 %

Basicity to Boniszewski 1,7

Typical Applications

Wire	Materials
OE-S2	ASME: ASTM A131 Grades A, B, D, DS; A253 All grades; A529 Grades 42, 50; A570 All grades; A572 Grades 42, 50; A709 Grades 36, 50 EN: 'S(P)235-S(P)355; L245-L360
OE-SD3	ASME: EN: 'S(P)235-S(P)355; L245-L360
OE-S2Mo	ASME: X 60, X 65, ASTM A355 Gr. P1; A182M Gr. F1 EN: 16 Mo 3, S(P)355-S(P)460, L245-L450
OE-S2CrMo1	ASME: A199 and A200 grade T11, A213 Grades T11, T12 EN: '13CrMo4-5, 13CrMoSi5-5

Analysis of all-weld metal (Typical values in %)

Wire	C	Mn	Si	Cr	Ni	Mo	Nb	N	Cu
OE-S2	0.04	0.80	0.10	-	-	-	-	-	-
OE-SD3	0.04	1.30	0.15	-	-	-	-	-	-
OE-S2Mo	0.04	0.80	0.10	-	-	0.50	-	-	-

All-weld metal Mechanical Properties

Wire	Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)
OE-S2	As Welded	≥ 400	450 - 550	≥ 24
OE-SD3	As Welded	≥ 400	500 - 600	≥ 24
OE-S2Mo	As Welded	≥ 480	550 - 650	≥ 20

All-weld metal Mechanical Properties - Cv

Wire	Heat Treatment	Charpy V Notch Impact Toughness (J)							
		+20	0	- 20	- 30	- 40	- 60	- 80	- 101
OE-S2	As Welded	150 min	110 min	90 min	-	-	-	-	-
OE-SD3	As Welded	160 min	130 min	100 min	-	70 min	-	-	-
OE-S2Mo	As Welded	90 min	70 min	40 min	-	-	-	-	-

Packaging data

25kg heavy duty sealed polythene sacks

Further forms of delivery on request.

Current condition

DC+; AC