

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

OP120C is an agglomerated fluoride-basic type flux for welding general structural steels, pipe steels as well as fine-grain steels. On account of its metallurgical behaviour it is used with OE-S1, OE-S2, OE-S2Mo wires. OP 120C is suitable for submerged-arc single wire, tandem and twin and multi arc, e.g. in the production of large pipes with the two-run technique. It shows excellent slag detachability even in the root pass.

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: F6A2 EM12K
OE-S2Mo	AWS	A5.23: F7P2-EA2-A2
	EN	760: SA FB 1 67 AC H10
OE-S2	EN	756: S 35 2 FB S2
OE-S2Mo	EN	756: S 38 4 FB S2Mo

Wire	Approvals	Grades
OE-S2Mo	TÜV	

see Appendix, Classification Society Approvals, for details pag. 521

Flux Analysis	
CaF ₂	15 %
SiO ₂	20 %
CaO + CaF ₂ + MgO +	50 %

Basicity to Boniszewski 2

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-S2Mo	ASME: ASTM A355 Gr. P1; A182M Gr. F1 EN: 16 Mo 3, S(P)355-S(P)460, L245-L450

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

Wire	C	Mn	Si	Cr	Ni	Mo	Nb	N	Cu
OE-S2	0.05	1.20	0.40	-	-	-	-	-	-
OE-S2Mo	0.06	1.20	0.40	-	-	0.40	-	-	-

All-weld metal Mechanical Properties

Wire	Heat Treatment	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5 (%)
OE-S2	As Welded	≥ 320	440-560	≥ 24
OE-S2Mo	As Welded	≥ 480	≥ 600	-

All-weld metal Mechanical Properties - Cv

Wire	Heat Treatment	Charpy V Notch Impact Toughness (J)							
		+20	0	- 20	- 30	- 40	- 50	- 60	- 196
OE-S2	As Welded	-	-	50	-	-	-	-	-
OE-S2Mo	As Welded	-	-	-	-	47	-	-	-

Packaging data

25kg heavy duty sealed polythene sacks

Further forms of delivery on request.

Current condition

DC+; AC