

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

OP160 is an agglomerated aluminate-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 wires. OP 160 is suitable for submerged-arc single wire, tandem and twin arc.

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: F7A2 EM12K
	EN	760: SA AB 1 66 AC H15
OE-S2	EN	756: S 38 2 AB S2

Wire	Approvals	Grades
OE-S2	ABS	
OE-S2	BV	
OE-S2	DNV	
OE-S2	LRS	

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

Flux Analysis	
Al <sub>2</sub> O <sub>3</sub> + TiO <sub>2</sub> + ZrO <sub>2</sub>	30 %
MnO + FeO	10 %
SiO <sub>2</sub>	15 %
CaO + CaF <sub>2</sub> + MgO	30 %

**Basicity to Boniszewski** 1,2

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

Wire	C	Mn	Si	Cr	Ni	Mo	Nb	N	Cu
OE-S2	0.05	1.30	0.40	-	-	-	-	-	-

### All-weld metal Mechanical Properties

Wire	Heat Treatment	Yield Strength N/mm <sup>2</sup>	Tensile Strength N/mm <sup>2</sup>	Elongation A5 (%)
OE-S2	As Welded	≥ 355	≥ 490	≥ 22

### 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	-	80	47	-	-	-	-	-

### Packaging data

25kg heavy duty sealed polythene sacks

Further forms of delivery on request.

### Current condition

**DC+; AC**