

Characteristics: FL160F is an agglomerated fluoride-basic flux suitable for welding of high strength low alloy steels to joint structural steels, boilers and pipe steels. Due to its manganese pick-up, this flux delivers a weld metal having excellent toughness properties in combination with wire type PITTARC S3Si.

This flux is suitable to be used with single wire, for tandem, multi-wire and twin-arc welding. The slag is easily detached and in the majority of applications is self-releasing. FL160F can be employed either as DC, positive pole, or AC with maximum current carrying capacity of 1.000 Amp. on a single wire.

Basicity index	about 3,1
Current	DC or AC, in single or multi-wires up to 1000 Amp. each wire electrode
Grain size	according to ISO 14174: 2-20 (0,2-2,0 mm.)
Density	about 1,2 kg./dm ³
Rebaking	at 350 °C for 2 hours to obtain diffusible hydrogen bellow 5 ml/100 gr.
Packaging	in plastic bags of 25 kg. each
Storage and Redrying	unopened original packed flux can be stored up to 3 years in dry storage rooms after date of delivery from the factory. Redrying conditions specific to the flux: 300-350° C effective temperature of the flux to obtain diffusible hydrogen bellow 5 ml/100 gr.

Chemical composition of all weld metal

In combination with wire	C%	Mn%	Si%	Ni%	Cr%	Mo%
PITTARC S2	0,07	1,2	0,3	-	-	-
PITTARC S3Si	0,07	1,6	0,3	-	-	-
PITTARC S2Mo	0,07	1,2	0,3	-	-	0,5
PITTARC S3Ni1Mo	0,07	1,6	0,3	0,9	-	0,5
PITTARC S2Cr1Mo	0,07	0,8	0,2	-	1,2	0,5
PITTARC S1Cr2Mo1	0,06	0,7	0,2	-	2,2	1

Mechanical properties of all weld metal

In combination with wire	Yield strength YS [MPa]	Tensile strength UTS [MPa]	Elong. A5d [%]	Impact test - ISO-V [J]				
				+ 20°C	0°C	- 20°C	- 40°C	- 60°C
PITTARC S2	≥ 420	500 ÷ 600	≥ 24	≥ 160	≥ 130	≥ 100	≥ 70	≥ 40
PITTARC S3Si	≥ 450	530 ÷ 650	≥ 25	-	≥ 180	-	≥ 100	≥ 70
PITTARC S3Si ⁽¹⁾	≥ 400	490 ÷ 590	≥ 27	-	≥ 200	-	≥ 120	≥ 90
PITTARC S2Mo	≥ 450	600 ÷ 700	≥ 24	≥ 130	≥ 90	≥ 70	≥ 40	-
PITTARC S3Ni1Mo ⁽¹⁾	≥ 580	680 ÷ 720	≥ 30	-	-	-	≥ 40	-
PITTARC S2Cr1Mo ⁽²⁾	≥ 450	550 ÷ 650	≥ 24	-	≥ 100	-	-	-
PITTARC S1Cr2Mo1 ⁽³⁾	≥ 380	530 ÷ 630	≥ 24	-	≥ 150	≥ 50	-	-

(¹): after post weld heat treatment at 620 °C / 2 hours

(²): after post weld heat treatment at 920 °C/air + 710 °C

(³): after post weld heat treatment at 940 °C/air + 740 °C

Classifications

In combination with wire	AWS A5.17 AWS A5.23	ISO 14171-A ISO 26304-A ISO 24598-A	AWS A5.17M AWS A5.23M	AWS A5.17 AWS A5.23
PITTARC S2	EM12-K	S 42 5 FB S2	F48A6/P6-EM12K	F7A6-EM12K
PITTARC S3Si	EH12K	S 46 6 FB S3Si	F55A6/F48P6-EH12K	F7P8-EH12K
PITTARC S2Mo	EA2	S 46 4 FB S2Mo	F55A4/F49P4-EA2-A2	F7P4-EA2-A2
PITTARC S3Ni1Mo	EF3	S 50 4 FB S3Ni1Mo	F62A4/P4-EF3-F3	F9P4-EF3-F3
PITTARC S2Cr1Mo	EB2	S CrMo1 FB	F49P2-EB2-B2	F7P2-EB2-B2
PITTARC S1Cr2Mo1	EB3	S CrMo2 FB	F49P2-EB3-B3	F7P2-EB3-B3

The above mentioned data may change without prior notice.

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