

OK Flux 10.81

Agglomerated, aluminate-rutile, low basicity flux for Submerged Arc Welding. Top-class surface finish and excellent slag detachability. High welding speeds. For pressure vessels, general construction, automotive, beam fabrication, low requirement pipeline steels, etc. Fine grained version especially for membrane wall panel fabrication. For butt welds and especially for concave horizontal fillet welds. Suitable for single and multi wire procedures, for DC and AC. Due to high Si-alloying intended for a limited number of passes and plate thickness up to about 25 mm.

Классификации	EN ISO 14174 : S A AR 1 97 AC
Одобрения	CE EN 13479 DB 51.039.04 NAKS/HAКC RD 03-613-03

Одобрения на материалы выдаются с привязкой к заводу изготовителю. Подробную информацию можно получить в представительствах ESAB.

Тип шлака	Aluminate-rutile
Перенос легирующего элемента	Very high Silicon and moderately Manganese alloying
Плотность	nom 1.2 kg/dm ³
Показатель щелочности	nom 0.6
Размер гранулы	0.2-1.6 mm (10x65 mesh) or 0.2-1.25 mm (14x65 mesh)

Flux Consumption

Volts	kg Flux / kg Wire DC+	kg Flux / kg Wire AC
26 V	0.7 kg	0.6 kg
30 V	1.0 kg	0.9 kg
34 V	1.3 kg	1.2 kg
38 V	1.6 kg	1.4 kg

Dimensions	Amps	Travel Speed
Ø 4.0 mm	580 A	55 cm/min

Classifications

Wire	SFA/AWS - EN ISO	EN - As Welded	AWS - As Welded	AWS - PWHT
OK Autrod 12.10	A5.17:EL12/ 14171-A:S1	14171-A: S 42 A AR S1	A5.17: F7AZ-EL12	A5.17: F7PZ-EL12
OK Autrod 12.20	A5.17:EM12/ 14171-A:S2	14171-A: S 46 0 AR S2	A5.17: F7A0-EM12	A5.17: F7PZ-EM12
OK Autrod 12.22	A5.17:EM12K/ 14171-A:S2Si	14171-A: S 50 A AR S2Si	A5.17: F7AZ-EM12K	A5.17: F7PZ-EM12K
OK Autrod 12.24	A5.23:EA2/ 14171-A:S2Mo; 24598-A:S S Mo	14171-A: S 50 A AR S2Mo	A5.23: F9AZ-EA2-A4	A5.23: F9PZ-EA2-A4
OK Autrod 12.30	14171-A:S3	14171-A: S 50 0 AR S3		
OK Autrod 13.10 SC	A5.23:EB2R/ 24598-A:S S CrMo1			A5.23: F9PZ-EB2R-G
OK Autrod 13.36	A5.23:EG/ 14171-A:S2Ni1Cu	14171-A: S 50 A AR S2Ni1Cu	A5.23: F9A0-EG-G	

Approvals

Combined with Wire	ABS	BV	DNV	GL	LR	DB	CE	VdTUV
OK Autrod 12.10	-	-	-	-	-	•	•	•
OK Autrod 12.20	•	•	•	•	•	•	•	•
OK Autrod 12.22	-	-	-	-	-	-	•	-
OK Autrod 12.24	-	-	-	-	-	-	-	•
OK Autrod 12.30	-	-	-	-	-	•	•	•
OK Autrod 13.10 SC	-	-	-	-	-	-	-	•
OK Autrod 13.36	-	-	-	-	-	-	•	-

Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.10	As Welded AWS DC+ hr	450 MPa	540 MPa	25 %	50 J @ 20°C 30 J @ 0°C
OK Autrod 12.10	As Welded EN AC hr	450 MPa	530 MPa	25 %	80 J @ 20°C 40 J @ 0°C
OK Autrod 12.20	As Welded AWS DC+ hr	510 MPa	610 MPa	25 %	80 J @ 20°C 60 J @ 0°C 40 J @ -18°C

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Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.20	As Welded EN AC hr	500 MPa	570 MPa	30 %	90 J @ 20°C 70 J @ 0°C 50 J @ -18°C
OK Autrod 12.22	As Welded AWS DC+ hr	530 MPa	610 MPa	24 %	60 J @ 20°C
OK Autrod 12.22	As Welded EN AC hr	550 MPa	640 MPa	20 %	70 J @ 20°C
OK Autrod 12.24	As Welded AWS DC+ hr	565 MPa	660 MPa	23 %	65 J @ 20°C 45 J @ 0°C
OK Autrod 12.24	As Welded EN AC hr	650 MPa	715 MPa	24 %	80 J @ 20°C 50 J @ 0°C
OK Autrod 12.30	As Welded EN AC hr	550 MPa	620 MPa	25 %	100 J @ 20°C 80 J @ 0°C
OK Autrod 12.30	As Welded EN DC+ hr	550 MPa	640 MPa	25 %	80 J @ 20°C 60 J @ 0°C
OK Autrod 13.36	As Welded AWS DC+	570 MPa	680 MPa	23 %	55 J @ 20°C 40 J @ 0°C 35 J @ -18°C
OK Autrod 13.36	As Welded EN AC	610 MPa	680 MPa	25 %	80 J @ 20°C 50 J @ 0°C 40 J @ -20°C
OK Autrod 13.36	As Welded EN AC hr	610 MPa	680 MPa	25 %	80 J @ 20°C 50 J @ 0°C 40 J @ -20°C
OK Autrod 13.10 SC	PWHT PWHT 575A DC+ 29V 1hr	650 MPa	730 MPa	22 %	30 J @ 20°C

Хим. состав наплавленного металла

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
OK Autrod 12.10 AC, 580A, 29V								
0.07	1.1	0.7	-	-	-	-	-	-
OK Autrod 12.10 DC+, 580A, 29V								
0.06	1.2	0.8	-	-	-	-	-	-
OK Autrod 12.20 AC, 580A, 29V								
0.09	1.4	0.7	-	-	-	-	-	-
OK Autrod 12.20 DC+, 580A, 29V								
0.07	1.5	0.8	-	-	-	-	-	-
OK Autrod 12.22 AC, 580A, 29V								
0.09	1.4	0.8	-	-	-	-	-	-
OK Autrod 12.22 DC+, 580A, 29V								
0.07	1.5	0.9	-	-	-	-	-	-
OK Autrod 12.24 AC, 580A, 29V								
0.09	1.4	0.7	-	-	-	-	0.5	-
OK Autrod 12.24 DC+, 580A, 29V								
0.07	1.5	0.8	-	-	-	-	0.5	-
OK Autrod 12.30 AC, 580A, 29V								
0.10	1.7	0.6	-	-	-	-	-	-
OK Autrod 12.30 DC+, 580A, 29V								
0.08	1.75	0.7	-	-	-	-	-	-
OK Autrod 13.10 SC DC+, 575A, 29V								
0.06	1.4	0.9	0.010	0.020	-	1.0	0.5	-
OK Autrod 13.36 AC, 580A, 29V								
0.09	1.3	0.8	-	-	0.7	0.3	-	0.5
OK Autrod 13.36 DC+, 580A, 29V								
0.07	1.4	0.9	-	-	0.7	0.3	-	0.5