

OK Flux 10.61

Agglomerated fluoride-basic flux-wire combination for Submerged Arc Welding. Designed for single-wire butt welding. For higher strength steels with minimum yield strength of up to 460 MPa, structural steels, fine grained steels, pressure vessel steels, etc. Suitable for DC only. Single layer and multi layer welding of unlimited plate thickness.

Specifications	
Classifications	EN ISO 14174 : S A FB 1 65 DC
Approvals	CE : EN 13479 DB : 51.039.03 NAKS/HAKC : RD 03-613-03

Approvals are based on factory location. Please contact ESAB for more information.

Slag Type	Fluoride-basic
Alloy Transfer	Slightly Silicon and no Manganese alloying
Density	nom: 1.1 kg/dm ³
Basicity Index	nom: 2.6

Flux Consumption	
Volts	kg Flux / kg Wire DC+
34 V	1.3 kg
30 V	1.0 kg
26 V	0.7 kg
38 V	1.6 kg

Condition : Dimension Ø 4.0 mm , Amps 580 A , Travel Speed 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 35 2 FB S1	-	-
OK Autrod 12.22	A5.17:EM12K/ 14171-A:S2Si	14171-A: S 38 4 FB S2Si	A5.17: F7A8-EM12K	A5.17: F6P8-EM12K
OK Autrod 12.24	A5.23:EA2/ 14171-A:S2Mo; 24598-A:S S Mo	14171-A: S 42 2 FB S2Mo	A5.23: F7A4-EA2-A2	A5.23: F7P2-EA2-A2
OK Autrod 12.32	A5.17:EH12K/ 14171-A:S3Si	14171-A: S 42 5 FB S3Si	A5.17: F7A6-EH12K	A5.17: F7P8-EH12K
OK Autrod 12.40	A5.17:EH14/ 14171-A:S4	14171-A: S 46 3 FB S4	A5.17: F7A6-EH14	A5.17: F7P6-EH14
OK Autrod 13.10 SC	A5.23:EB2R/ 24598-A:S S CrMo1	-	-	A5.23: F8P2-EB2R-B2
OK Autrod 13.20 SC	A5.23:EB3R/ 24598-A:S S CrMo2	-	-	A5.23: F8P0-EB3R-B3
OK Autrod 13.36	A5.23:EG/ 14171-A:S2Ni1Cu	14171-A: S 46 3 FB S2Ni1Cu	-	-

Approvals			
Wire	CE	DB	VdTÜV
OK Autrod 12.10	•	•	•
OK Autrod 12.22	•	-	-
OK Autrod 12.24	•	-	•
OK Autrod 12.32	•	-	-
OK Autrod 13.10 SC	•	•	•
OK Autrod 13.20 SC	-	-	•
OK Autrod 13.36	•	•	-

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Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
OK Autrod 12.10 DC+, 580A, 29V								
0.07	0.5	0.15	-	-	-	-	-	-
OK Autrod 12.22 DC+, 580A, 29V								
0.08	1.0	0.35	-	-	-	-	-	-
OK Autrod 12.24 DC+, 580A, 29V								
0.06	1.0	0.25	-	-	-	-	0.5	-
OK Autrod 12.32 DC+, 580A, 29V								
0.09	1.4	0.3	-	-	-	-	-	-
OK Autrod 12.40 DC+, 580A, 29V								
0.08	1.8	0.15	-	-	-	-	-	-
OK Autrod 13.10 SC DC+, 580A, 29V								
0.08	0.7	0.30	-	-	-	1.1	0.5	-
OK Autrod 13.20 SC DC+, 580A, 29V								
0.08	0.8	0.3	-	-	-	2.1	1.0	-
OK Autrod 13.36 DC+, 580A, 29V, 55cm/min								
0.07	1.0	0.5	-	-	0.7	0.2	-	0.4
OK Autrod 13.36								
-	-	-	0.010	0.015	-	-	-	-

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	Cu	X-bar
OK Autrod 12.10							
0.07	0.52	0.08	-	-	-	-	-
OK Autrod 12.22							
0.09	1.01	0.19	-	-	-	-	-
OK Autrod 12.24							
0.09	1.08	0.14	-	-	0.48	-	-
OK Autrod 12.32							
0.13	1.77	0.30	-	-	-	-	-
OK Autrod 12.40							
0.12	2.04	0.08	-	-	-	-	-
OK Autrod 13.10 SC							
0.10	0.83	0.12	-	1.21	0.49	-	-
OK Autrod 13.20 SC							
0.11	0.66	0.15	-	2.33	0.95	-	11
OK Autrod 13.36							
0.10	0.95	0.29	0.78	0.29	-	0.48	-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.10	As Welded EN DC+	375 MPa	445 MPa	30 %	180 J @ 20 °C 130 J @ -10 °C 100 J @ -20 °C
OK Autrod 12.22	As Welded AWS DC+	440 MPa	520 MPa	30 %	120 J @ -20 °C 85 J @ -30 °C 75 J @ -40 °C 35 J @ -62 °C

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Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.22	As Welded EN DC+	430 MPa	500 MPa	30 %	130 J @ -20 °C 80 J @ -30 °C 70 J @ -40 °C 35 J @ -62 °C
OK Autrod 12.24	As Welded EN DC+	480 MPa	560 MPa	26 %	130 J @ 20 °C 120 J @ 0 °C 80 J @ -20 °C 45 J @ -29 °C 35 J @ -40 °C
OK Autrod 12.24	As Welded AWS DC+	480 MPa	570 MPa	26 %	130 J @ 20 °C 120 J @ 0 °C 80 J @ -20 °C 45 J @ -29 °C 35 J @ -40 °C
OK Autrod 12.32	As Welded AWS DC+	450 MPa	560 MPa	27 %	120 J @ -20 °C 100 J @ -40 °C 55 J @ -51 °C 35 J @ -62 °C
OK Autrod 12.32	As Welded EN DC+	450 MPa	550 MPa	26 %	110 J @ -20 °C 90 J @ -40 °C 55 J @ -50 °C 40 J @ -62 °C
OK Autrod 12.40	As Welded AWS DC+	490 MPa	580 MPa	26 %	60 J @ -30 °C 40 J @ -40 °C 35 J @ -51 °C
OK Autrod 12.40	As Welded EN DC+	490 MPa	570 MPa	25 %	60 J @ -30 °C 40 J @ -40 °C 35 J @ -51 °C
OK Autrod 13.36	As Welded 580A, 29V, 55cm/min DC+	545 MPa	640 MPa	25 %	70 J @ -20 °C 55 J @ -30 °C 40 J @ -40 °C 35 J @ -50 °C