

OK Flux 10.70

Agglomerated aluminate-basic flux-wire-combination for Submerged Arc Welding. Especially designed for applications with high dilution from the base material, e.g. butt welds with one run from each side or fillet welds. Good impact properties down to -30°C due to high alloying of Mn and Si. Mainly for shipbuilding steels. Also for pressure vessel steels, structural steels, fine grained steels, etc. Suitable for single and multi wire procedures, for DC and AC welding. Intended for a limited number of passes and plate thickness up to about 25 mm.

Specifications

Classifications	EN ISO 14174 : S A AB 1 79 AC
Approvals	CE : EN 13479 DB : 51.039.06

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

Slag Type	Aluminate-basic
Alloy Transfer	Moderately Silicon and very high Manganese alloying
Density	nom: 1.2 kg/dm ³
Basicity Index	nom: 1.4

Flux Consumption

Volts	kg Flux / kg Wire DC+	kg Flux / kg Wire AC
34 V	1.3 kg	1.2 kg
30 V	1.0 kg	0.9 kg
26 V	0.7 kg	0.6 kg
38 V	1.6 kg	1.4 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 42 3 AB S1	A5.17: F7A4-EL12	A5.17: F7P4-EL12
OK Autrod 12.20	A5.17:EM12/ 14171-A:S2	14171-A: S 46 3 AB S2	A5.17: F7A2-EM12	A5.17: F7P2-EM12
OK Autrod 12.24	A5.23:EA2/ 14171-A:S2Mo; 24598-A:S S Mo	14171-A: S 50 0 AB S2Mo	A5.23: F9A0-EA2-A3	A5.23: F9PZ-EA2-A3

Approvals

Wire	CE	DB	VdTÜV	ABS	BV	DNV	GL	LR	PRS	RS
OK Autrod 12.10	•	•	•	•	•	•	•	•	•	•
OK Autrod 12.20	•	•	•	-	-	-	-	-	-	-

Typical Weld Metal Analysis %

C	Mn	Si	Mo
OK Autrod 12.10 DC+ , 580A, 29V			
0.05	1.7	0.5	-
OK Autrod 12.10 AC , 580A, 29V			
0.06	1.6	0.5	-
OK Autrod 12.20 AC, 580A, 29V			
0.07	1.8	0.5	-
OK Autrod 12.20 DC+, 580A, 29V			
0.06	1.9	0.6	-
OK Autrod 12.24 AC, 580A, 29V			
0.07	1.8	0.5	0.5
OK Autrod 12.24 DC+, 580A, 29V			
0.06	2.0	0.6	0.5

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Typical Wire Composition %

C	Mn	Si	Mo
OK Autrod 12.10			
0.07	0.52	0.08	-
OK Autrod 12.20			
0.10	1.06	0.07	-
OK Autrod 12.24			
0.09	1.08	0.14	0.48

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.10	As Welded AWS DC+	430 MPa	520 MPa	30 %	125 J @ 20 °C 100 J @ 0 °C 70 J @ -20 °C 55 J @ -30 °C 40 J @ -40 °C
OK Autrod 12.10	As Welded EN AC	450 MPa	530 MPa	28 %	150 J @ 20 °C 120 J @ 0 °C 90 J @ -20 °C 65 J @ -30 °C
OK Autrod 12.20	As Welded EN AC	490 MPa	590 MPa	27 %	120 J @ 20 °C 110 J @ 0 °C 90 J @ -20 °C 60 J @ -30 °C
OK Autrod 12.20	As Welded AWS DC+	470 MPa	580 MPa	29 %	100 J @ 20 °C 90 J @ 0 °C 75 J @ -20 °C 50 J @ -29 °C
OK Autrod 12.24	As Welded AWS DC+	580 MPa	670 MPa	23 %	60 J @ 20 °C 50 J @ 0 °C 40 J @ -18 °C
OK Autrod 12.24	As Welded EN AC	630 MPa	700 MPa	25 %	80 J @ 20 °C 60 J @ 0 °C 45 J @ -20 °C