

OK Flux 10.72

Agglomerated aluminate-basic flux for Submerged Arc Welding especially for applications with toughness requirements at low temperature. Excellent slag removal also in narrow V-joints. For wind tower productions, pressure vessels, general constructions etc. Extremely high current carrying capacity. For single or multi wire procedures. Suitable for DC and AC welding. Single layer and multi layer welding of unlimited plate thickness.

Classifications	EN ISO 14174 : S A AB 1 57 AC H5
Approvals	CE EN 13479 DB 51.039.12

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

Diffusible Hydrogen	max 5 ml H/100g weld metal (Redried flux)
Slag Type	Aluminate-basic
Alloy Transfer	No Silicon and moderately Manganese alloying
Density	nom 1.2 kg/dm ³
Basicity Index	nom 1.9
Grain Size	0.315-2.0 mm (9x48 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 12.20	A5.17:EM12/ 14171-A:S2	14171-A: S 38 5 AB S2	A5.17: F7A8-EM12	A5.17: F6P8-EM12
OK Autrod 12.22	A5.17:EM12K/ 14171-A:S2Si	14171-A: S 38 5 AB 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 46 3 AB S2Mo	A5.23: F8A5-EA2-A3	A5.23: F8P5-EA2-A3
OK Autrod 13.24	A5.23:ENi6/ 14171-A: S3Ni1Mo0,2			
OK Autrod 13.27	A5.23:ENi2/ 14171-A:S2Ni2	14171-A: S 46 6 AB S2Ni2	A5.23: F8A8-ENi2-Ni2	A5.23: F7P8-ENi2-Ni2
OK Autrod 13.62	A5.23:EG/ 14171-A:SZ3TiB			
OK Autrod 13.64	A5.23:EA2TiB/ 14171-A: S2MoTiB		A5.23: F8TA8-EA2TiB	

Approvals

Combined with Wire	DNV	GL	DB	CE	CWB	VdTÜV
OK Autrod 12.20	-	-	•	•	-	•
OK Autrod 12.22	•	•	•	•	•	•
OK Autrod 12.24	-	-	•	•	-	•
OK Autrod 13.27	-	-	-	•	-	-

Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.20	As Welded AWS DC+ hr	415 MPa	500 MPa	30 %	125 J @ -30°C 125 J @ -30°C 100 J @ -40°C 70 J @ -50°C 70 J @ -50°C 50 J @ -62°C 50 J @ -62°C
OK Autrod 12.20	As Welded EN AC hr	420 MPa	500 MPa	33 %	140 J @ -30°C 130 J @ -40°C 80 J @ -50°C

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Typical Mechanical Properties					
Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 12.22	As Welded AWS DC+ hr	415 MPa	500 MPa	30 %	120 J @ -30°C 120 J @ -30°C 100 J @ -40°C 70 J @ -50°C 70 J @ -50°C 50 J @ -62°C 50 J @ -62°C
OK Autrod 12.22	As Welded EN AC hr	425 MPa	500 MPa	32 %	140 J @ -30°C 130 J @ -40°C 80 J @ -50°C
OK Autrod 12.24	As Welded AWS DC+ hr	500 MPa	590 MPa	25 %	60 J @ -30°C 60 J @ -30°C 40 J @ -40°C 35 J @ -46°C 35 J @ -46°C
OK Autrod 12.24	As Welded EN AC hr	535 MPa	600 MPa	24 %	70 J @ -30°C 50 J @ -40°C 40 J @ -50°C
OK Autrod 13.24	As Welded AWS DC+ hr	530 MPa	660 MPa	28 %	90 J @ 0°C 35 J @ -40°C
OK Autrod 13.27	As Welded AWS DC+ hr	490 MPa	610 MPa	30 %	100 J @ -40°C 80 J @ -51°C 80 J @ -51°C 50 J @ -62°C 50 J @ -62°C
OK Autrod 13.27	As Welded EN AC hr	520 MPa	610 MPa	27 %	120 J @ -30°C 100 J @ -40°C 80 J @ -50°C 60 J @ -60°C
OK Autrod 13.62	As Welded (acc. AWS) Plate thickness: 12mm; Heat Input: 2.2kJ/mm; Side 1: 600A, 32V, 53cm/min; Side 2: 700A, 32V, 60cm/min; DC+ hr	500 MPa	610 MPa	27 %	50 J @ -62°C 50 J @ -62°C
OK Autrod 13.64	As Welded (acc. to AWS) Plate thickness 12mm Heat input 2.2kJ/mm 700A, 32V, 60cm/min DC+ hr	560 MPa	660 MPa	27 %	50 J @ -62°C 50 J @ -62°C

Typical Weld Metal Analysis %					
C	Mn	Si	Ni	Mo	
OK Autrod 12.20 AC, 580A, 29V					
0.06	1.4	0.2	-	-	
OK Autrod 12.20 DC+, 580A, 29V					
0.05	1.5	0.2	-	-	
OK Autrod 12.22 AC, 580A, 29V					
0.06	1.4	0.3	-	-	
OK Autrod 12.22 DC+, 580A, 29V					
0.05	1.5	0.3	-	-	
OK Autrod 12.24 AC, 580A, 29V					
0.06	1.5	0.2	-	0.5	
OK Autrod 12.24 DC+, 580A, 29V					
0.05	1.6	0.2	-	0.5	
OK Autrod 13.27 AC, 580A, 29V					
0.07	1.4	0.30	2.2	-	
OK Autrod 13.27 DC+, 520A, 29V					
0.05	1.4	0.30	2.2	-	