

OK Flux 10.93

OK Flux 10.93 är ett basiskt, agglomererat svetspulver för pulverbågsnetsning av rostfritt stål. En lämplig flux för svetsning av höglegerade CrNi-stål som t.ex. Duplexa stål. Den låga Si-halt under svetsning ger goda mekaniska egenskaper i svetsgodset. (Art nr 1093)

Klassificering	EN ISO 14174 : S A AF 2 56 54 DC
Godkännanden	CE EN 13479

Godkännanden baseras på fabriken lokaliserad. Vänligen kontakta ESAB för mer information.

Slagtyp	Fluoride basic CaF ₂ -Al ₂ O ₃ -SiO ₂
Legeringsöverföring	Non alloying
Densitet	nom 1.0 kg/dm ³
Basisitets index	nom 1.9

Flux Consumption

Volts	kg Flux / kg Wire DC+	kg Flux / kg Wire AC
26 V	0.5 kg	-
30 V	0.6 kg	-
34 V	0.8 kg	-
38 V	1.0 kg	-

Dimensions	Amps	Travel Speed
4.0 mm	580 A	33 m/h

Classifications

Wire	AWS/EN
OK Autrod 16.10	A5.9:ER308L
OK Autrod 16.11	A5.9:ER347
OK Autrod 16.30	A5.9:ER316L
OK Autrod 16.38	14343-A:S 20 16 3 Mn L
OK Autrod 16.53	A5.9:ER309L
OK Autrod 16.97	14343-A:S 18 8 Mn
OK Autrod 2209	A5.9:ER2209/ 14343-A:S 22 9 3 N L
OK Autrod 2307	14343-A:S 23 7 N L
OK Autrod 2509	A5.9:ER2594/ 14343-A:S 25 9 4 N L
OK Autrod 308H	A5.9:ER308H/ 14343-A:S 19 9 H
OK Autrod 308L	A5.9:ER308L/ 14343-A:S 19 9 L
OK Autrod 308L LF	-
OK Autrod 309L	A5.9:ER309L/ 14343-A:S 23 12 L
OK Autrod 309MoL	A5.9:ER309LMo (mod)/ 14343-A:S 23 12 2 L
OK Autrod 310MoL	14343-A:S 25 22 2 N L
OK Autrod 312	A5.9:ER312/ 14343-A:S 29 9
OK Autrod 316H	A5.9:ER316H/ 14343-A:S 19 12 3 H
OK Autrod 316L	A5.9:ER316L/ 14343-A:S 19 12 3 L
OK Autrod 316LMn	A5.9:ER316LMn/ 14343-A:S 20 16 3 Mn N L
OK Autrod 317L	A5.9:ER317L/ 14343-A:S 18 15 3 L
OK Autrod 318	A5.9:ER318/ 14343-A:S 19 12 3 Nb
OK Autrod 347	A5.9:ER347/ 14343-A:S 19 9 Nb
OK Autrod 385	A5.9:ER385/ 14343-A:S 20 25 5 Cu L
OK Autrod 410NiMo	14343-A:S 13 4
OK Autrod NiCrMo-3	A5.14:ERNiCrMo-3/ 18274:S Ni 6625 (NiCr22Mo9Nb)
OK Autrod NiCrMo-4	A5.14:ERNiCrMo-4/ 18274:S Ni 6276 (NiCr15Mo16Fe6W4)

Approvals

Wire	ABS	BV	DNV	GL	LR	DB	CE	RINA	ClassNK	VdTÜV
OK Autrod 16.97	-	-	•	-	-	-	-	-	-	-
OK Autrod 2209	•	•	•	•	•	-	•	•	•	•
OK Autrod 2509	-	-	-	-	-	-	•	-	-	•
OK Autrod 308L	•	•	•	-	-	•	•	-	-	•
OK Autrod 308L LF	-	-	-	-	-	-	•	-	-	•
OK Autrod 309L	•	-	•	-	•	-	•	-	-	•

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Approvals

Wire	ABS	BV	DNV	GL	LR	DB	CE	RINA	ClassNK	VdTÜV
OK Autrod 316L	•	-	•	-	-	•	•	-	-	•
OK Autrod 318	-	-	-	-	-	•	•	-	-	•
OK Autrod 347	-	-	-	-	-	•	•	-	-	•
OK Autrod 385	-	-	-	-	-	-	-	-	-	•

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 16.10	As Welded DC+	410 MPa	570 MPa	38 %	80 J @ -60°C 60 J @ -110°C 45 J @ -196°C
OK Autrod 16.11	As Welded DC+	420 MPa	590 MPa	36 %	60 J @ -60°C 45 J @ -110°C 30 J @ -196°C
OK Autrod 16.30	As Welded DC+	400 MPa	530 MPa	35 %	70 J @ -60°C 65 J @ -110°C 40 J @ -196°C
OK Autrod 16.38	As Welded DC+	410 MPa	600 MPa	44 %	70 J @ -60°C 60 J @ -110°C 40 J @ -196°C
OK Autrod 16.53	As Welded DC+	430 MPa	570 MPa	35 %	65 J @ -60°C 55 J @ -110°C 35 J @ -196°C
OK Autrod 16.97	As Welded DC+	400 MPa	600 MPa	45 %	60 J @ -20°C
OK Autrod 2209	As Welded DC+	630 MPa	780 MPa	30 %	140 J @ 20°C 125 J @ -20°C 110 J @ -40°C 80 J @ -60°C
OK Autrod 2307	As Welded DC+	560 MPa	730 MPa	32 %	140 J @ 20°C 125 J @ -20°C 90 J @ -40°C 60 J @ -60°C
OK Autrod 2509	As Welded DC+	640 MPa	840 MPa	28 %	85 J @ 20°C 60 J @ -40°C
OK Autrod 308L	As Welded DC+	400 MPa	560 MPa	38 %	100 J @ 20°C 75 J @ -40°C 65 J @ -60°C 55 J @ -110°C 40 J @ -196°C
OK Autrod 308L	As Welded dia 4.0 mm 500A DC+ 30V	400 MPa	560 MPa	38 %	100 J @ 20°C 75 J @ -40°C 65 J @ -60°C 55 J @ -110°C 35 J @ -196°C
OK Autrod 308L LF	As Welded Dia 2.4 mm 45 cm/min 400A DC+ 28V	400 MPa	550 MPa	40 %	40 J @ -196°C
OK Autrod 309L	As Welded DC+	430 MPa	570 MPa	33 %	90 J @ 20°C 70 J @ -60°C 60 J @ -110°C 35 J @ -196°C
OK Autrod 309MoL	As Welded DC+	400 MPa	600 MPa	38 %	120 J @ 20°C
OK Autrod 310MoL	As Welded DC+	335 MPa	575 MPa	42 %	120 J @ 20°C
OK Autrod 316H	As Welded AWS 475A; 30V; H.I 2.0 kJ/mm DC+	410 MPa	550 MPa	40 %	85 J @ 20°C 75 J @ 0°C
OK Autrod 316L	As Welded DC+	390 MPa	565 MPa	42 %	100 J @ 20°C 95 J @ -40°C 90 J @ -60°C 75 J @ -110°C 40 J @ -196°C
OK Autrod 316LMn	As Welded 420A, 30V, 30m/h DC+	410 MPa	600 MPa	44 %	70 J @ -60°C 60 J @ -110°C 40 J @ -196°C
OK Autrod 317L	As Welded DC+	440 MPa	615 MPa	28 %	80 J @ 20°C 50 J @ -60°C
OK Autrod 318	As Welded DC+	440 MPa	600 MPa	42 %	100 J @ 20°C 90 J @ -60°C 40 J @ -110°C
OK Autrod 347	As Welded 420A DC+ Feed speed: 30m/h 27V	455 MPa	635 MPa	36 %	105 J @ 20°C 85 J @ -60°C 60 J @ -110°C 30 J @ -196°C
OK Autrod 385	As Welded DC+	310 MPa	530 MPa	35 %	80 J @ 20°C
OK Autrod 410NiMo	As Welded DC+, 450A, 28V	900 MPa	1000 MPa	15.5 %	30 J @ 0°C 30 J @ -20°C

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Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 410NiMo	Stress Relieved DC+, 450A, 28V Stress relieved 600°C, 2h	770 MPa	850 MPa	19 %	55 J @ 0°C 55 J @ -20°C
OK Autrod 410NiMo	Stress Relieved DC+, 500A, 30V Stress relieved 580°C, 4h	785 MPa	860 MPa	18 %	55 J @ 0°C 50 J @ -20°C
OK Autrod NiCrMo-3	As Welded DC+	450 MPa	710 MPa	45 %	90 J @ -60°C 80 J @ -196°C
OK Autrod NiCrMo-4	As Welded HI 1.6-1.8 kJ/mm DC+	450 MPa	700 MPa	45 %	100 J @ -60°C 80 J @ -196°C

Typical Weld Metal Analysis %

C	Mn	Si	Ni	Cr	Mo	Cu	N	Nb	FN WRC-92	Fe
OK Autrod 16.11 DC+, As welded										
0.05	1.20	0.55	8.50	18.30	-	-	-	0.50	-	-
OK Autrod 16.30 DC+, As welded										
0.02	1.40	0.50	10.60	17.50	2.00	-	-	-	-	-
OK Autrod 16.53 DC+, As welded										
0.02	1.40	0.50	11.60	22.10	-	-	-	-	-	-
OK Autrod 16.97										
0.06	6.3	1.2	8.0	18.0	-	-	-	-	-	-
OK Autrod 2209 Current: DC+, 420A, 27V										
0.02	1.3	0.5	9.0	22.5	3.1	-	0.17	-	45	-
OK Autrod 2509 Current: DC+, 420A, 27V										
0.02	0.4	0.5	10.0	23.5	3.5	-	0.19	-	40	-
OK Autrod 308H DC+										
0.05	1.5	0.6	9.9	19.9	-	-	-	-	-	-
OK Autrod 308L DC+, As welded										
0.02	1.4	0.6	10.0	19.5	-	-	-	-	-	-
OK Autrod 308L LF DC+, As welded										
0.02	1.5	0.5	10.3	19.2	-	-	-	-	5	-
OK Autrod 309L Current: DC+, 420 A, 27 V										
0.02	1.3	0.5	12.5	23.0	-	-	-	-	-	-
OK Autrod 309MoL DC+, 420 A, 27 V										
0.02	1.5	0.5	14.5	20.8	2.8	-	-	-	-	-
OK Autrod 310MoL Current: DC+, 420A, 27V										
0.02	4.0	0.1	22.0	24.5	2.1	-	0.12	-	0	-
OK Autrod 312 Current: DC+, 420A, 27V										
0.1	1.5	0.5	9.5	29.0	-	-	-	-	-	-
OK Autrod 316H DC+										
0.04	1.5	0.6	11.2	18.4	2.1	-	-	-	-	-
OK Autrod 316L										
0.02	1.4	0.5	12.5	18.0	2.6	-	-	-	8	-
OK Autrod 316LMn										
0.02	5.4	0.7	15.5	20.0	2.5	-	0.13	-	-	-
OK Autrod 317L Current: DC+, 420 A, 27 V										
0.02	1.5	0.5	13.5	18.5	3.2	-	-	-	-	-
OK Autrod 318 Current: DC+, 440A, 30V										
0.035	1.2	0.5	12.0	18.5	2.6	-	-	0.3	-	-
OK Autrod 347 Current: DC+, 420A, 27V										
0.035	1.1	0.5	9.6	19.2	-	-	-	0.5	8	-
OK Autrod 385 Current: DC+, 420A, 27V										
0.02	1.5	0.5	25.0	19.0	4.0	1.5	0.02	-	-	-
OK Autrod 410NiMo DC+, 450A, 28V										
0.02	0.4	0.5	4.1	11.7	0.51	-	-	-	-	-
OK Autrod NiCrMo-3 Current: DC+, 400A, 28V, travel speed: 25 m/h.										
0.02	0.2	0.4	-	22	9	-	-	-	-	5