

OK Flux 10.62

ESAB OK Flux 10.62 is a high basicity, neutral, bonded flux intended primarily for multipass butt welding carbon and low alloy steel plate. OK Flux 10.62 produces weld metal that is very clean metallurgically and exhibits exceptional impact toughness at low temperatures. OK Flux 10.62 provides well-shaped beads and free peeling slag. Applications for OK Flux 10.62 include offshore oil rigs (meets CTOD requirements), fracture critical bridge members, ship construction, pressure vessels, and tank cars. It is suitable for use with AC and DC, single and multiwire systems at currents up to 1000 amps. OK Flux 10.62 should only be used in applications where the base plate is free of rust and mill scale.

Classifications	AWS A5.17 : F7A8-EH12K AWS A5.23 : F12A6-EF5-G AWS A5.23 : F11A6-EM4-M4 AWS A5.23 : F9A6-EM2-M2 AWS A5.23 : F8P2-EB3-B3 AWS A5.23 : F8P2-EB2-B2 AWS A5.23 : F8P8-ENi4-Ni4 AWS A5.23 : F8A4-ENi4-Ni4 AWS A5.23 : F7A4-ENi1-Ni1 AWS A5.23 : F9P4-EA3-A3 AWS A5.23 : F9A8-EA3-A3 AWS A5.23 : F8A6-EA2-A2 AWS A5.17 : F7P6-EM14K AWS A5.17 : F7A6-EM14K AWS A5.17 : F6P8-EM12K AWS A5.17 : F7P6-EH12K AWS A5.17 : F7A8-EM12K ASME SFA 5.17 ASME SFA 5.23
Approvals	NAKS/HAKC RD 03-613-03 DB 51.039.07 CE EN 13479 CWB CSA W48 F49A6-EM12K-H8

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

Diffusible Hydrogen	max 5 ml H/100g weld metal (Redried flux); max 4 ml H/100g in BlockPac (moisture protection)
Slag Type	Fluoride-basic
Alloy Transfer	No Silicon or Manganese alloying
Density	nom 1.1 kg/dm ³
Basicity Index	nom 3.2
Grain Size	0.2-1.6 mm (10x65 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	AWS/EN	AWS - As Welded	AWS - PWHT
ESAB SA10K	A5.17:EH10K	A5.17: F7A6-EH10K	A5.17: F7P8-EH10K
OK Autrod 12.22	A5.17:EM12K/ 14171-A:S2Si	A5.17: F7A8-EM12K	A5.17: F6P8-EM12K
OK Autrod 12.24	A5.23:EA2/ 14171-A:S2Mo; 24598-A:S S Mo	A5.23: F8A6-EA2-A2	A5.23: F8P6-EA2-A2
OK Autrod 12.24L	A5.23:EA2/ 14171-B:SU2M3	A5.23: F8A4-EA2-A2	A5.23: F8P4-EA2-A2
OK Autrod 12.32	A5.17:EH12K/ 14171-A:S3Si	A5.17: F7A8-EH12K	A5.17: F7P8-EH12K
OK Autrod 12.33L	A5.23:EA3K	A5.23: F10A4-EA3K-G	A5.23: F9P4-EA3K-G
OK Autrod 12.34	A5.23:EA4/ 14171-A:S3Mo; 24598-A:S S MnMo	A5.23: F8A6-EA4-A4	A5.23: F8P6-EA4-A4
OK Autrod 12.40	A5.17:EH14/ 14171-A:S4	A5.17: F7A6-EH14	A5.17: F7P6-EH14
OK Autrod 12.40L	A5.17:EH14/ 14171-B:SU41	A5.17: F7A6-EH14	A5.17: F7P6-EH14
OK Autrod 12.40L India	A5.17:EH14	A5.17: F7A6-EH14	A5.17: F7P6-EH14
OK Autrod 12.44	A5.23:EA3/ 24598-B:SU 4M3	A5.23: F9A8-EA3-A3	A5.23: F9P8-EA3-A3

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Classifications

Wire	AWS/EN	AWS - As Welded	AWS - PWHT
OK Autrod 13.10 SC	A5.23:EB2R/ 24598-A:S S CrMo1		A5.23: F8P2-EB2R-B2
OK Autrod 13.20 SC	AWS A5.23: EB3R		F8P2-EB3-B3
OK Autrod 13.21	A5.23:ENi1/ 14171-A:S2Ni1	A5.23: F7A6-ENi1-Ni1	A5.23: F7P8-ENi1-Ni1
OK Autrod 13.24	A5.23:ENi6/ 14171-A:S3Ni1Mo0,2	A5.23: F8A10-ENi6-Ni6	A5.23: F8P8-ENi6-Ni6
OK Autrod 13.27	A5.23:ENi2/ 14171-A:S2Ni2	A5.23: F7A10-ENi2-Ni2	A5.23: F7P10-ENi2-Ni2
OK Autrod 13.36	A5.23:EG/ 14171-A:S2Ni1Cu	A5.23: F8A6-EG-G	
OK Autrod 13.40	A5.23:EG/ 14171-A:S3Ni1Mo; 26304-A:S3Ni1Mo; 26304-B:(SUN2M2)	A5.23: F10A8-EG-F3 (AC)	A5.23: F9P8-EG-F3
OK Autrod 13.43	A5.23:EG/ 26304-A:S3Ni2,5CrMo; 26304-B:(SUN4C1M3)	A5.23: F11A8-EG-G	A5.23: F11P8-EG-G
OK Autrod 13.44	A5.23:EG/ 26304-A:S3Ni1,5CrMo	A5.23: F9A8-EG-G	
OK Autrod 13.49	A5.23:ENi3/ 14171-A:S2Ni3	A5.23: F8A15-ENi3-Ni3	A5.23: F8P15-ENi3-Ni3

Approvals

Combined with Wire	ABS	BV	DNV	GL	LR	DB	CE	RINA	RS	VdTUV
OK Autrod 12.22	•	•	•	•	•	•	•	-	-	•
OK Autrod 12.24	-	-	-	-	-	-	•	-	-	•
OK Autrod 12.32	•	•	•	•	•	•	•	•	•	•
OK Autrod 12.34	•	•	•	•	•	-	-	-	•	-
OK Autrod 13.10 SC	-	-	-	-	-	•	•	-	-	•
OK Autrod 13.20 SC	-	-	-	-	-	-	•	-	-	•
OK Autrod 13.24	•	•	•	•	•	-	•	-	-	-
OK Autrod 13.27	•	•	•	•	•	•	•	•	•	•
OK Autrod 13.43	•	•	•	•	•	-	•	-	-	-
OK Tubrod 15.27S	•	-	•	•	•	-	•	-	-	-

Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod 13.20SC	Stress Relieved 1 hr @ 621C (1150F) ()	530 MPa (77 ksi)	630 MPa (91 ksi)	25 %	80 J @ -29°C (59 ft-lb @ -20°F)
Spoolarc 53	As Welded ()	485 MPa (70 ksi)	656 MPa (82 ksi)	29 %	88 J @ -62°C (65 ft-lb @ -80°F)
Spoolarc 53	Stress Relieved 1 hr @ 621C (1150F) ()	430 MPa (63 ksi)	530 MPa (77 ksi)	31 %	114 J @ -51°C (84 ft-lb @ -60°F)
Spoolarc 71	As Welded ()	515 MPa (75 ksi)	590 MPa (85 ksi)	28 %	136 J @ -51°C (100 ft-lb @ -60°F)
Spoolarc 71	Stress Relieved 1 hr @ 621C (1150F) ()	500 MPa (72 ksi)	575 MPa (83 ksi)	30 %	160 J @ -51°C (119 ft-lb @ -60°F)
Spoolarc 71	Stress Relieved 8 hrs @ 621C (1150F) ()	515 MPa (74 ksi)	570 MPa (83 ksi)	28 %	187 J @ -51°C (138 ft-lb @ -60°F)
Spoolarc 75	As Welded ()	475 MPa (69 ksi)	550 MPa (80 ksi)	60 %	136 J @ -40°C (100 ft-lb @ -40°F)
Spoolarc 81	As Welded ()	450 MPa (65 ksi)	555 MPa (75 ksi)	32 %	150 J @ -51°C (110 ft-lb @ -60°F)
Spoolarc 81	Stress Relieved 1 hr @ 621C (1150F) ()	370 MPa (54 ksi)	480 MPa (70 ksi)	32 %	217 J @ -46°C (160 ft-lb @ -50°F)
Spoolarc ENi4	As Welded ()	510 MPa (74 ksi)	595 MPa (86 ksi)	29 %	132 J @ -40°C (97 ft-lb @ -40°F)
Spoolarc ENi4	Stress Relieved 1 hr @ 621C (1150F) ()	515 MPa (75 ksi)	610 MPa (89 ksi)	28 %	64 J @ -73°C (47 ft-lb @ -100°F)
Spoolarc ENi4	Stress Relieved 8 hrs @ 621C (1150F) ()	540 MPa (78 ksi)	645 MPa (90 ksi)	27 %	84 J @ -73°C (62 ft-lb @ -100°F)
Spoolarc U515	Stress Relieved 1 hr @ 621C (1150F) ()	515 MPa (75 ksi)	600 MPa (87 ksi)	27 %	190 J @ -29°C (140 ft-lb @ -20°F)
Spoolarc U515	Stress Relieved 8 hrs @ 621C (1150F) ()	515 MPa (75 ksi)	600 MPa (87 ksi)	27 %	190 J @ -29°C (140 ft-lb @ -20°F)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
OK Autrod 13.20SC								
0.08	0.60	0.20	0.005	0.010	-	2.0	0.85	0.85
Spoolarc 53								

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Typical Weld Metal Analysis %								
C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.08	1.5	0.3	0.009	0.018	-	-	-	-
Spoolarc 71								
0.06	1.1	0.4	0.004	0.012	-	-	-	-
Spoolarc 75								
0.07	1.0	0.5	0.005	0.009	0.8	-	-	-
Spoolarc 81								
0.07	1.0	0.3	0.007	0.016	-	-	-	-
Spoolarc ENi4								
0.01	1.8	0.3	0.004	0.004	1.8	-	0.16	-
Spoolarc U515								
0.05	0.70	0.19	0.007	0.011	0.04	1.60	0.52	0.52