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.

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

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

Diffusible Hydrogen	max 5 ml/100g weld metal (Redried flux); max 4 ml/100g in BlockPac (moisture protection)
Slag Type	Fluoride-basic
Alloy Transfer	No Silicon or Manganese alloying
Density	nom: 1.1 kg/dm3
Basicity Index	nom: 3.2

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

Conditions : Dimension Ø 4.0 mm , Amps 580 A , Travel speed 55 cm/min

Classifications	Wire	Weld Metal	
Wire	**AWS/EN**	**AWS - As Welded**	**AWS - PWHT**
OK Autrod 13.20 SC	AWS A5.23: EB3R	-	F8P2-EB3-B3
Spoolarc 53	AWS A5.17: EH12K	F7A8-EH12K	F7P6-EH12K
Spoolarc 71	AWS A5.17: EM14K	F7A6-EM14K	F7P6-EM14K
Spoolarc 75	AWS A5.23: ENi1K	F7A4-ENi1-Ni1	-
Spoolarc 81	AWS A5.17: EM12K	F7A8-EM12K	F6P8-EM12K, F7P6-EM12K

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Classifications	Wire	Weld Metal	
Wire	**AWS/EN**	**AWS - As Welded**	**AWS - PWHT**
Spoolarc ENi4	AWS A5.23: ENi4	F8A4-ENi4-Ni4	F8P8-ENi4-Ni4
Spoolarc U515	AWS A5.23: EB2R	-	F8P2-EB2-B2

Approvals

Combined with Wire	ABS	BV	CE	DB	DNV	GL	LR	RINA	RS	VdTÜV
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 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								
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

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	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 71	As Welded	515 MPa (75 ksi)	590 MPa (85 ksi)	28 %	136 J @ -51 °C (100 ft-lb @ -60 °F)

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Typical Mechanical Properties					
Combined with Wire	**Condition**	**Yield Strength**	**Tensile Strength**	**Elongation**	**Charpy V-Notch**
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	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 ENi4	As Welded	510 MPa (74 ksi)	595 MPa (86 ksi)	29 %	132 J @ -40 °C (97 ft-lb @ -40 °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)
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)