

OK Flux 10.65

Agglomerated fluoride-basic flux for Submerged Arc Welding. Especially for combination with OK Autrod B3 SC. Designed for multi-run welding of creep resistant Cr-, Mo-alloyed steels when highest toughness values are required also after step cooling treatment. Very low level of impurities and thus exceptionally clean weld metal. X-bar max. 10 with the wire as above. Mainly for petrochemical and chemical industries, power generation, pressure vessels, etc. Suitable for narrow gap welding. Low-oxygen weld metal (approx. 300 ppm) and hydrogen contents lower than 5 ml/100 g, in BlockPac (moisture protection) maximum 4 ml/100g. Designed for single and multi wire procedures, welds equally well on DC and AC current. Mainly for multi layer welding of unlimited plate thickness.

Classifications	EN ISO 14174 : S A FB 1 65 AC H4 only BlockPac/moisture protection EN ISO 14174 : S A FB 1 65 AC H5
Approvals	CE EN 13479

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	Slightly Silicon and no Manganese alloying
Density	nom 1.0 kg/dm ³
Basicity Index	nom 2.4 %
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	SFA/AWS - EN ISO	AWS - PWHT
OK Autrod B3 SC	A5.23:EB3R/ 24598-A:S S CrMo2	A5.23: F9P2-EB3R-B3R

Approvals

Combined with Wire	CE
OK Autrod B3 SC	•

Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
OK Autrod B3 SC	PWHT AWS AC 1hr ()	580 MPa (84 ksi)	700 MPa (102 ksi)	25 %	100 J @ -30°C (74 ft-lb @ -22°F) 100 J @ -30°C (74 ft-lb @ -22°F)
OK Autrod B3 SC	PWHT AWS DC+ 1hr ()	580 MPa (84 ksi)	690 MPa (100 ksi)	17 %	100 J @ -30°C (74 ft-lb @ -22°F)
OK Autrod B3 SC	PWHT EN ISO AC 1hr ()	560 MPa (81 ksi)	680 MPa (99 ksi)	18 %	200 J @ 20°C (148 ft-lb @ 68°F) 200 J @ 20°C (148 ft-lb @ 68°F)
OK Autrod B3 SC	PWHT AWS DC+ 4hr ()	520 MPa (75 ksi)	640 MPa (93 ksi)	26 %	130 J @ -30°C (96 ft-lb @ -22°F) 130 J @ -30°C (96 ft-lb @ -22°F)
OK Autrod B3 SC	PWHT AWS AC 4hr ()	540 MPa (78 ksi)	650 MPa (94 ksi)	25 %	170 J @ -30°C (126 ft-lb @ -22°F) 170 J @ -30°C (126 ft-lb @ -22°F)
OK Autrod B3 SC	PWHT AWS AC 32hr ()	460 MPa (67 ksi)	590 MPa (86 ksi)	29 %	170 J @ -30°C (126 ft-lb @ -22°F) 170 J @ -30°C (126 ft-lb @ -22°F)
OK Autrod B3 SC	PWHT AWS DC+ 32hr ()	440 MPa (64 ksi)	570 MPa (83 ksi)	28 %	100 J @ -30°C (74 ft-lb @ -22°F) 100 J @ -30°C (74 ft-lb @ -22°F)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
OK Autrod B3 SC AC, 480A, 29V, HI 1.9 kJ/mm									

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Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
0.10	0.84	0.17	0.005	0.005	0.04	2.38	0.96	0.005	0.01

OK Autrod B3 SC DC+, 480A, 29V, HI 1.9 kJ/mm

0.09	0.93	0.23	0.006	0.005	0.04	2.30	0.96	0.005	0.01
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Cu	Nb	Ti	Sb	As	B	Sn	Mn+Si	Nb+Ti+V	P+Sn
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OK Autrod B3 SC AC, 480A, 29V, HI 1.9 kJ/mm

0.05	0.002	0.002	0.001	0.002	0.0002	0.003	1.00	0.009	0.008
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OK Autrod B3 SC DC+, 480A, 29V, HI 1.9 kJ/mm

0.05	0.003	0.002	0.001	0.002	0.0002	0.003	1.15	0.009	0.008
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PE	J-Factor	X-bar
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OK Autrod B3 SC AC, 480A, 29V, HI 1.9 kJ/mm

3.0	85	7
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OK Autrod B3 SC DC+, 480A, 29V, HI 1.9 kJ/mm

3.1	92	7
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