



OK Flux 10.71

Agglomerated aluminate-basic flux for Submerged Arc Welding. General purpose flux with excellent welding performance, suitable for all kinds of steels. High impact toughness values. Fits to a large range of SAW wires. For general constructions, pressure vessels, shipbuilding, pipe mills, wind tower productions, transport industries, etc. Designed for single and multi wire procedures, for butt and fillet welds. Suitable for DC and AC welding. Single layer and multi layer welding of unlimited plate thickness.

Specifications

Classifications	EN ISO 14174 : S A AB 1 67 AC H5
Approvals	CE : EN 13479 DB : 51.039.05 NAKS/HAKC : RD 03-613-03

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	Slightly Silicon and moderately Manganese alloying
Density	nom: 1.2 kg/dm ³
Basicity Index	nom: 1.5
Grain Size (met)	0.2-1.6 mm (10x65 mesh) or 0.315 -2.0 mm (9x48 mesh)

Flux Consumption

Volts	kg Flux / kg Wire DC+	kg Flux / kg Wire AC
34 V	1.3 kg	1.2 kg
30 V	1.0 kg	0.9 kg
26 V	0.7 kg	0.6 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
ESAB SA10K	A5.17:EH10K		A5.17: F7A4-EH10K	A5.17: F7P6-EH10K
OK Autrod 12.08L	A5.17:EL8/EL12/ 14171-A:S1		A5.17: F6A2-EL8	
OK Autrod 12.10	A5.17:EL12/ 14171-A:S1	14171-A: S 35 4 AB S1	A5.17: F6A4-EL12	A5.17: F6P5-EL12
OK Autrod 12.20	A5.17:EM12/ 14171-A:S2	14171-A: S 38 4 AB S2	A5.17: F7A4-EM12	A5.17: F6P4-EM12
OK Autrod 12.22	A5.17:EM12K/ 14171-A:S2Si	14171-A: S 38 4 AB S2Si	A5.17: F7A5-EM12K	A5.17: F6P5-EM12K
OK Autrod 12.22L	A5.17:EM12K/ 14171-B:SU21		A5.17: F7A4-EM12K	A5.17: F6P5-EM12K
OK Autrod 12.24	A5.23:EA2/ 14171-A:S2Mo; 24598-A:S S Mo	14171-A: S 46 2 AB S2Mo	A5.23: F8A2-EA2-A4	A5.23: F7P0-EA2-A4
OK Autrod 12.24L	A5.23:EA2/ 14171-B:SU2M3		A5.23: F8A2-EA2-A4	A5.23: F7P0-EA2-A4
OK Autrod 12.30	14171-A:S3	14171-A: S 46 3 AB S3		
OK Autrod 12.32	A5.17:EH12K/ 14171-A:S3Si	14171-A: S 46 4 AB S3Si	A5.17: F7A5-EH12K	A5.17: F7P5-EH12K
OK Autrod 12.33L	A5.23:EA3K		A5.23: F9A0-EA3K-G	A5.23: F8P0-EA3K-G
OK Autrod 12.34	A5.23:EA4/ 14171-A:S3Mo; 24598-A:S S MnMo	14171-A: S 50 3 AB S3Mo	A5.23: F8A4-EA4-A3	A5.23: F8P2-EA4-A3
OK Autrod 12.40L	A5.17:EH14/ 14171-B:SU41		A5.17: F7A4-EH14	A5.17: F7P5-EH14
OK Autrod	A5.23:ENi6/ 14171-A:S3Ni1Mo0,	14171-A: S 50 4 AB	A5.23: F8A5-	A5.23: F8P4-

Classifications

Wire	SFA/AWS - EN ISO	EN - As Welded	AWS - As Welded	AWS - PWHT
13.24	2	S3Ni1Mo0,2	ENi6-Ni6	ENi6-Ni6
OK Autrod 13.27	A5.23:ENi2/ 14171-A:S2Ni2	14171-A: S 46 5 AB S2Ni2	A5.23: F8A6- ENi2-Ni2	A5.23: F7P6- ENi2-Ni2
OK Autrod 13.36	A5.23:EG/ 14171-A:S2Ni1Cu	14171-A: S 46 3 AB S2Ni1Cu	A5.23: F8A2- EG-G	
OK Autrod 13.62	A5.23:EG/ 14171-A:SZ3TiB			
OK Autrod 13.64	A5.23:EA2TiB/ 14171-A: S2MoTiB		A5.23: F8TA6- EA2TiB	

Approvals

Wire	VdT		Class							M N			RI		
	CE	ÜV	DB	ABS	BV	DNV	GL	LR	NK	RS	IBR	IRS	Dastur	PRS	NA
OK Autrod 12.08L	-	-	-		-	-	-	-	-	-	-	-	-	-	-
OK Autrod 12.10									-		-	-			-
OK Autrod 12.20									-		-	-			
OK Autrod 12.22											-	-		-	-
OK Autrod 12.22L	-	-	-	-	-	-	-		-	-	-	-		-	-
OK Autrod 12.24											-	-			
OK Autrod 12.30				-	-	-	-	-	-	-	-	-		-	-
OK Autrod 12.32				-	-	-	-	-	-	-	-	-		-	-
OK Autrod 12.40L	-	-	-	-	-		-		-	-				-	-

Approvals

Wire	VdT		Class							M N			RI		
	CE	ÜV	DB	ABS	BV	DNV	GL	LR	NK	RS	IBR	IRS	Dastur	PRS	NA
OK Autrod 13.27	-		-	-	-	-	-	-	-	-	-	-	-	-	-
OK Autrod 13.36		-	-	-	-	-	-	-	-	-	-	-	-	-	-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
ESAB SA10K	PWHT DC+ (5 hour(s))	410 MPa (59 ksi)	500 MPa (73 ksi)	34 %	40 J @ -29 °C (30 ft-lb @ -20.2 °F)
ESAB SA10K	As Welded DC+	490 MPa (71 ksi)	580 MPa (84 ksi)	26 %	70 J @ -18 °C (52 ft-lb @ -0.4 °F) 45 J @ -29 °C (33 ft-lb @ -20.2 °F) 30 J @ -40 °C (22 ft-lb @ -40 °F)
ESAB SA10K	PWHT DC+ (1 hour(s))	430 MPa (62 ksi)	530 MPa (77 ksi)	32 %	120 J @ -18 °C (89 ft-lb @ -0.4 °F)

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
) 100 J @ -29 °C (74 ft-lb @ -20.2 °F) 75 J @ -40 °C (56 ft-lb @ -40 °F) 40 J @ -51 °C (30 ft-lb @ -59.8 °F)
OK Autrod 12.08L	As Welded DC+	390 MPa (57 ksi)	450 MPa (65 ksi)	25 %	120 J @ 0 °C (89 ft-lb @ 32 °F) 100 J @ -18 °C (74 ft-lb @ -0.4 °F) 70 J @ -29 °C (52 ft-lb @ -20.2 °F)
OK Autrod 12.08L	PWHT DC+ (1 hour(s))	300 MPa (44 ksi)	390 MPa (57 ksi)	35 %	125 J @ 0 °C (93 ft-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
)			lb @ 32 °F) 110 J @ -18 °C (81 ft-lb @ -0.4 °F) 80 J @ -29 °C (59 ft-lb @ -20.2 °F)
OK Autrod 12.10	As Welded EN AC	385 MPa	470 MPa (68 ksi)	30 %	150 J @ 0 °C (111 ft-lb @ 32 °F) 120 J @ -20 °C (89 ft-lb @ -4 °F) 85 J @ -30 °C (63 ft-lb @ -22 °F) 70 J @ -40 °C (52 ft-lb @ -40 °F)
OK Autrod 12.10	As Welded AWS DC+	360 MPa (52 ksi)	465 MPa (67 ksi)	30 %	125 J @ 0 °C (93 ft-lb @ 32

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					°F) 95 J @ -20 °C (70 ft- lb @ -4 °F) 75 J @ -30 °C (56 ft- lb @ -22 °F) 65 J @ -40 °C (48 ft- lb @ -40 °F) 125 J @ 0 °C (93 ft- lb @ 0 ° F) 95 J @ -20 °C (70 ft- lb @ -20 °F) 75 J @ -30 °C (56 ft- lb @ -30 °F)
OK Autrod 12.20	As Welded AWS DC+	410 MPa (59 ksi)	510 MPa (74 ksi)	29 %	135 J @ 20 °C (100 ft- lb @ 68 °F) 125 J @ 0 °C (93 ft- lb @ 32

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					°F) 80 J @ -20 °C (59 ft- lb @ -4 °F) 55 J @ -40 °C (41 ft- lb @ -40 °F) 135 J @ 20 ° C (100 ft- lb @ 20 °F) 125 J @ 0 °C (93 ft- lb @ 0 ° F) 80 J @ -20 °C (59 ft- lb @ -20 °F)
OK Autrod 12.20	As Welded EN AC	430 MPa	535 MPa (78 ksi)	33 %	150 J @ 20 ° C (111 ft- lb @ 68 °F) 130 J @ 0 °C (96 ft- lb @ 32 °F) 115 J @ -20 ° C

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					(85 ft-lb @ -4 °F) 70 J @ -40 °C (52 ft-lb @ -40 °F)
OK Autrod 12.22	As Welded AWS DC+	425 MPa (62 ksi)	520 MPa (75 ksi)	29 %	140 J @ 0 °C (104 ft-lb @ 32 °F) 100 J @ -20 °C (74 ft-lb @ -4 °F) 60 J @ -40 °C (44 ft-lb @ -40 °F) 40 J @ -46 °C (30 ft-lb @ -50.8 °F) 140 J @ 0 °C (104 ft-lb @ 0 °F) 100 J @ -20 °C (74 ft-lb @ -20 °F)

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					40 J @ -46 °C (30 ft-lb @ -46 °F)
OK Autrod 12.22	As Welded EN AC	460 MPa	550 MPa (80 ksi)	28 %	145 J @ 0 °C (107 ft-lb @ 32 °F) 125 J @ -20 °C (93 ft-lb @ -4 °F) 90 J @ -40 °C (67 ft-lb @ -40 °F)
OK Autrod 12.22L	As Welded DC+	450 MPa (65 ksi)	540 MPa (78 ksi)	29 %	60 J @ -18 °C (44 ft-lb @ -0.4 °F) 45 J @ -29 °C (33 ft-lb @ -20.2 °F) 30 J @ -40 °C (22 ft-lb @ -40 °F)
OK	PWHT DC+ (6 hour(s))	360	490	36	60 J @

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
Autrod 12.22L		MPa (52 ksi)	MPa (71 ksi)	%	-29 °C (44 ft-lb @ -20.2 °F)
OK Autrod 12.22L	PWHT DC+ (1 hour(s))	390 MPa (57 ksi)	490 MPa (71 ksi)	32 %	90 J @ -18 °C (67 ft-lb @ -0.4 °F) 65 J @ -29 °C (48 ft-lb @ -20.2 °F) 40 J @ -40 °C (30 ft-lb @ -40 °F) 30 J @ -46 °C (22 ft-lb @ -50.8 °F)
OK Autrod 12.22L	PWHT DC+ (10 hour(s))	360 MPa (52 ksi)	480 MPa (70 ksi)	33 %	100 J @ -29 °C (74 ft-lb @ -20.2 °F)
OK Autrod 12.24	As Welded EN AC	550 MPa	620 MPa (90 ksi)	23 %	130 J @ 20 °C (96 ft-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					lb @ 68 °F) 110 J @ 0 °C (81 ft-lb @ 32 °F) 70 J @ -20 °C (52 ft-lb @ -4 °F) 40 J @ -40 °C (30 ft-lb @ -40 °F)
OK Autrod 12.24	As Welded AWS DC+	500 MPa (73 ksi)	580 MPa (84 ksi)	24 %	125 J @ 20 °C (93 ft-lb @ 68 °F) 100 J @ 0 °C (74 ft-lb @ 32 °F) 60 J @ -18 °C (44 ft-lb @ -0.4 °F) 40 J @ -29 °C (30 ft-lb @ -20.2 °F) 125 J

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					@ 20 °C (93 ft-lb @ 20 °F) 100 J @ 0 °C (74 ft-lb @ 0 °F) 60 J @ -18 °C (44 ft-lb @ -18 °F) 40 J @ -29 °C (30 ft-lb @ -29 °F)
OK Autrod 12.24L	As Welded DC+	550 MPa (80 ksi)	610 MPa (88 ksi)	23 %	90 J @ 0 °C (67 ft-lb @ 32 °F) 65 J @ -18 °C (48 ft-lb @ -0.4 °F) 40 J @ -29 °C (30 ft-lb @ -20.2 °F)
OK Autrod 12.24L	PWHT DC+ (1 hour(s))	480 MPa (70 ksi)	560 MPa (81 ksi)	26 %	80 J @ 0 °C (59 ft-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
)			lb @ 32 °F) 50 J @ -18 °C (37 ft-lb @ -0.4 °F)
OK Autrod 12.30	As Welded EN DC+	490 MPa	580 MPa (84 ksi)	29 %	130 J @ 20 °C (96 ft-lb @ 20 °F) 110 J @ 0 °C (81 ft-lb @ 0 °F) 90 J @ -20 °C (67 ft-lb @ -20 °F) 60 J @ -30 °C (44 ft-lb @ -30 °F) 130 J @ 20 °C (96 ft-lb @ 68 °F) 110 J @ 0 °C (81 ft-lb @ 32 °F) 90 J @

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					-20 °C (67 ft-lb @ -4 °F) 60 J @ -30 °C (44 ft-lb @ -22 °F)
OK Autrod 12.30	As Welded EN AC	510 MPa	590 MPa (86 ksi)	28 %	140 J @ 20 °C (104 ft-lb @ 68 °F) 120 J @ 0 °C (89 ft-lb @ 32 °F) 100 J @ -20 °C (74 ft-lb @ -4 °F) 70 J @ -30 °C (52 ft-lb @ -22 °F)
OK Autrod 12.32	As Welded EN AC	530 MPa	615 MPa (89 ksi)	28 %	140 J @ 20 °C (104 ft-lb @ 68 °F) 120 J @ 0 °C (89 ft-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					lb @ 32 °F) 100 J @ -20 °C (74 ft-lb @ -4 °F) 60 J @ -40 °C (44 ft-lb @ -40 °F)
OK Autrod 12.32	As Welded AWS DC+	480 MPa (70 ksi)	580 MPa (84 ksi)	28 %	150 J @ 20 °C (111 ft-lb @ 68 °F) 130 J @ 0 °C (96 ft-lb @ 32 °F) 95 J @ -20 °C (70 ft-lb @ -4 °F) 65 J @ -40 °C (48 ft-lb @ -40 °F) 40 J @ -46 °C (30 ft-lb @ -50.8 °F) 150 J

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					@ 20 °C (111 ft-lb @ 20 °F) 130 J @ 0 °C (96 ft-lb @ 0 °F) 95 J @ -20 °C (70 ft-lb @ -20 °F) 40 J @ -46 °C (30 ft-lb @ -46 °F)
OK Autrod 12.33L	As Welded DC+	630 MPa (91 ksi)	700 MPa (102 ksi)	25 %	65 J @ 0 °C (48 ft-lb @ 32 °F) 35 J @ -18 °C (26 ft-lb @ -0.4 °F)
OK Autrod 12.33L	PWHT DC+ (1 hour(s))	550 MPa (80 ksi)	650 MPa (94 ksi)	30 %	70 J @ 0 °C (52 ft-lb @ 32 °F) 40 J @ -18 °C (30 ft-lb @

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					-0.4 °F)
OK Autrod 12.34	As Welded AWS DC+	535 MPa (78 ksi)	620 MPa (90 ksi)	27 %	120 J @ 20 ° C (89 ft-lb @ 68 °F) 105 J @ 0 °C (78 ft-lb @ 32 °F) 70 J @ -20 °C (52 ft-lb @ -4 °F) 60 J @ -30 °C (44 ft-lb @ -22 °F) 45 J @ -40 °C (33 ft-lb @ -40 °F) 120 J @ 20 ° C (89 ft-lb @ 20 °F) 105 J @ 0 °C (78 ft-lb @ 0 ° F) 70 J @ -20 °C

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					(52 ft-lb @ -20 °F) 60 J @ -30 °C (44 ft-lb @ -30 °F)
OK Autrod 12.34	As Welded EN AC	560 MPa	635 MPa (92 ksi)	23 %	135 J @ 20 °C (100 ft-lb @ 68 °F) 120 J @ 0 °C (89 ft-lb @ 32 °F) 100 J @ -20 °C (74 ft-lb @ -4 °F) 80 J @ -30 °C (59 ft-lb @ -22 °F) 60 J @ -40 °C (44 ft-lb @ -40 °F)
OK Autrod 12.40L	As Welded DC+	490 MPa (71 ksi)	580 MPa (84 ksi)	27 %	75 J @ -18 °C (56 ft-lb @ -0.4 °F

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
) 60 J @ -29 °C (44 ft- lb @ -20.2 ° F) 40 J @ -40 °C (30 ft- lb @ -40 °F)
OK Autrod 12.40L	PWHT DC+ (1 hour(s))	440 MPa (64 ksi)	530 MPa (77 ksi)	29 %	100 J @ -18 °C (74 ft- lb @ -0.4 °F) 80 J @ -29 °C (59 ft- lb @ -20.2 ° F) 55 J @ -40 °C (41 ft- lb @ -40 °F) 45 J @ -46 °C (33 ft- lb @ -50.8 ° F)
OK Autrod 13.24	As Welded EN AC	610 MPa	680 MPa (99 ksi)	25 %	150 J @ 20 °C (111 ft-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					lb @ 68 °F) 120 J @ -20 °C (89 ft-lb @ -4 °F) 100 J @ -30 °C (74 ft-lb @ -22 °F) 90 J @ -40 °C (67 ft-lb @ -40 °F)
OK Autrod 13.24	As Welded AWS DC+	560 MPa (81 ksi)	630 MPa (91 ksi)	25 %	120 J @ 20 °C (89 ft-lb @ 68 °F) 85 J @ -20 °C (63 ft-lb @ -4 °F) 70 J @ -30 °C (52 ft-lb @ -22 °F) 60 J @ -40 °C (44 ft-lb @ -40 °F) 40 J @

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					-46 °C (30 ft-lb @ -50.8 °F) 120 J @ 20 °C (89 ft-lb @ 20 °F) 85 J @ -20 °C (63 ft-lb @ -20 °F) 70 J @ -30 °C (52 ft-lb @ -30 °F) 40 J @ -46 °C (30 ft-lb @ -46 °F)
OK Autrod 13.27	As Welded EN AC	530 MPa	620 MPa (90 ksi)	28 %	120 J @ -20 °C (89 ft-lb @ -4 °F) 90 J @ -40 °C (67 ft-lb @ -40 °F) 60 J @ -50 °C (44 ft-

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					lb @ -58 °F)
OK Autrod 13.27	As Welded AWS DC+	500 MPa (73 ksi)	600 MPa (87 ksi)	28 %	100 J @ -20 ° C (74 ft-lb @ -4 °F) 60 J @ -40 ° C (44 ft-lb @ -40 °F) 50 J @ -51 ° C (37 ft-lb @ -59.8 ° F) 100 J @ -20 ° C (74 ft-lb @ -20 °F) 50 J @ -51 ° C (37 ft-lb @ -51 °F)
OK Autrod 13.36	As Welded AWS DC+	490 MPa (71 ksi)	580 MPa (84 ksi)	27 %	120 J @ 20 ° C (89 ft-lb @ 68 °F) 70 J @ -20 ° C (52 ft-lb @ -4

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
					°F) 55 J @ -29 °C (41 ft- lb @ -20.2 ° F) 120 J @ 20 ° C (89 ft- lb @ 20 °F) 70 J @ -20 °C (52 ft- lb @ -20 °F) 55 J @ -29 °C (41 ft- lb @ -29 °F)
OK Autrod 13.36	As Welded EN AC	515 MPa	590 MPa (86 ksi)	27 %	150 J @ 20 ° C (111 ft- lb @ 68 °F) 90 J @ -20 °C (67 ft- lb @ -4 °F) 80 J @ -30 °C (59 ft- lb @ -22 °F)
OK	As Welded (acc. AWS) Plate thickness 12mm; Heat Input 2.2	510	610	28	40 J @

Typical Mechanical Properties

Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
Autrod 13.62	kJ/mm; Side 1 600A, 32V, 53cm/min; Side 2 700A, 32V, 60cm/min. DC+	MPa (74 ksi)	MPa (88 ksi)	%	-51 °C (30 ft-lb @ -59.8 ° F) 40 J @ -51 °C (30 ft-lb @ -51 °F)
OK Autrod 13.64	As Welded (acc. to AWS) Plate thickness 12mm Heat input 2.2kJ/mm 700A, 32V, 60cm/min DC+	550 MPa (80 ksi)	650 MPa (94 ksi)	28 %	40 J @ -51 °C (30 ft-lb @ -59.8 ° F) 40 J @ -51 °C (30 ft-lb @ -51 °F)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
ESAB SA10K DC+ 550A, 29V								
0.07	1.75	0.50	-	-	-	-	-	-
OK Autrod 12.08L DC+ 550A, 29V								
0.06	0.90	0.20	-	-	-	-	-	-
OK Autrod 12.10 DC+ , 580A, 29V								
0.04	1.0	0.3	-	-	-	-	-	-
OK Autrod 12.10 AC , 580A, 29V								
0.05	0.85	0.2	-	-	-	-	-	-

Typical Weld Metal Analysis %								
C	Mn	Si	S	P	Ni	Cr	Mo	Cu
OK Autrod 12.20 AC, 580A, 29V								
0.06	1.2	0.2	-	-	-	-	-	-
OK Autrod 12.20 DC+, 580A, 29V								
0.05	1.35	0.3	-	-	-	-	-	-
OK Autrod 12.22 AC, 580A, 29V								
0.06	1.2	0.4	-	-	-	-	-	-
OK Autrod 12.22 DC+, 580A, 29V								
0.05	1.4	0.5	-	-	-	-	-	-
OK Autrod 12.22L DC+ 550A, 29V								
0.08	1.35	0.40	-	-	-	-	-	-
OK Autrod 12.24 AC, 580A, 29V								
0.06	1.3	0.25	-	-	-	-	0.5	-
OK Autrod 12.24 DC+, 580A, 29V								
0.05	1.4	0.4	-	-	-	-	0.5	-
OK Autrod 12.24L DC+ 550A, 29V								
0.08	1.35	0.40	0.020	0.025	-	-	0.45	-
OK Autrod 12.30 AC, 580A, 29V								
0.10	1.6	0.3	-	-	-	-	-	-
OK Autrod 12.30 DC+, 580A, 29V								
0.09	1.65	0.4	-	-	-	-	-	-
OK Autrod 12.32 DC+, 580A, 29V								
0.09	2.0	0.5	-	-	-	-	-	-
OK Autrod 12.32 AC, 580A, 29V								
0.10	1.9	0.35	-	-	-	-	-	-

Typical Weld Metal Analysis %								
C	Mn	Si	S	P	Ni	Cr	Mo	Cu
OK Autrod 12.33L DC+								
0.06	1.95	0.75	-	-	-	-	0.40	-
OK Autrod 12.34 AC, 580A, 29V								
0.10	1.5	0.25	-	-	-	-	0.5	-
OK Autrod 12.34 DC+, 580A, 29V								
0.09	1.6	0.4	-	-	-	-	0.5	-
OK Autrod 12.40L DC+ 550A, 29V								
0.07	1.95	0.40	-	-	-	-	-	-
OK Autrod 13.24 AC , 580A, 29V								
0.09	1.50	0.45	-	-	0.9	-	0.2	-
OK Autrod 13.24 DC+, 580A, 29V								
0.07	1.70	0.5	-	-	0.9	-	0.2	-
OK Autrod 13.27 AC, 580A, 29V								
0.06	1.3	0.3	-	-	2.2	-	-	-
OK Autrod 13.27 DC+, 580A, 29V								
0.05	1.4	0.4	-	-	2.2	-	-	-
OK Autrod 13.36 AC , 580A, 29V								
0.09	1.2	0.4	-	-	0.7	0.3	-	0.5
OK Autrod 13.36 DC+, 580A, 29V								
0.08	1.3	0.5	-	-	0.7	0.3	-	0.5