

MILD STEEL
SUBARC (SAW)

Agglomerated, aluminate-rutile, low basicity flux for Submerged Arc Welding. High welding speeds. Smooth weld beads and excellent slag detachability. For general construction, membrane wall panels, beam fabrications, automotive (wheels), etc. Primarily used with single- or twin-arc wire systems. For DC and AC. For single pass butt welds, overlap welds and fillet welds at high speeds.

Specifications	
Classifications	EN ISO 14174 : S A AR 1 85 AC
Approvals	CE : EN 13479 UKCA : EN 13479

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

Slag Type	Aluminate-rutile
Alloy Transfer	High Silicon, no Manganese alloying
Density	nom: 1.2 kg/dm ³
Basicity Index	nom: 0.3

Flux_Consumption_SAW		
Volts	DC+ Weight	AC Weight
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

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

Classifications_SAW				
Wire	AWS/EN	EN - As Welded	AWS - As Welded	AWS - PWHT
OK Autrod 12.10	A5.17:EL12/ 14171-A:S1	14171-A: S 38 Z AR S1	A5.17: F7AZ-EL12	A5.17: F6PZ-EL12
OK Autrod 12.22	A5.17:EM12K/ 14171-A:S2Si	14171-A: S 42 Z AR S2Si	A5.17: F7AZ-EM12K	A5.17: F7PZ-EM12K

Approvals_SAW		
Wire	CE	VdTÜV
OK Autrod 12.22	•	•

Typical Weld Metal Analysis %		
C	Mn	Si
OK Autrod 12.10 DC+, 580A, 29V		
0.05	0.5	0.7
OK Autrod 12.10 AC, 580A, 29V		
0.05	0.6	0.7
OK Autrod 12.22 AC, 580A, 29V		
0.06	1.0	0.8
OK Autrod 12.22 DC+, 580A, 29V		
0.05	0.9	0.8

Typical Wire Composition %		
C	Mn	Si
OK Autrod 12.10		
0.07	0.52	0.08
OK Autrod 12.22		
0.09	1.01	0.19

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SAW_Typical_Mech_Properties

Wire	Testing Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch Result
OK Autrod 12.10	As Welded EN AC	430 MPa	500 MPa	27 %	50 J @ 20 °C
OK Autrod 12.10	As Welded AWS DC+	440 MPa	520 MPa	30 %	30 J @ 20 °C
OK Autrod 12.22	As Welded EN AC	470 MPa	550 MPa	26 %	70 J @ 20 °C 50 J @ 0 °C
OK Autrod 12.22	As Welded AWS DC+	470 MPa	560 MPa	26 %	50 J @ 20 °C 30 J @ 0 °C