

OK Flux 231

Specifications

Classifications	ASME SFA 5.17 AWS A5.17 : F7A2-EL12 AWS A5.17 : F7A2-EM12K
Approvals	CWB : CSA W48 E49A3-EM12K-H8
Industry	Railcars Tank and Vessel Fabrication Ship/Barge Building Structural Steel Fabrication

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

Slag Type	AR (Aluminate-Rutile)
Alloy Transfer	High silicon alloyin and moderately manganese alloying
Density	nom: 1.1 kg/dm3
Basicity Index	nom: 0.5

Classifications

Wire	AWS/EN
Spoolarc 83	A5.23:EA3K

Approvals

Combined with Wire	CWB
Spoolarc 81	•

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
Spoolarc 75								
0.08	0.89	0.46	0.01	0.00	0.98	0.04	0.01	0.07
Spoolarc 81								
0.09	0.95	0.26	0.01	0.01	-	-	-	-
Spoolarc 83								
0.08	1.69	0.63	0.011	0.01	0.09	-	0.4	0.17

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
Spoolarc 75 As Welded								
0.05	1.54	0.85	0.003	0.020	0.78	0.03	<0.01	0.060
Spoolarc 81 As Welded								
0.05	1.41	0.74	0.011	0.024	0.03	0.03	0.01	0.100
Spoolarc 81								
0.08	1.40	0.30	0.01	0.02	-	-	-	-
Spoolarc 83 As Welded								
0.04	2.09	1.21	0.008	0.024	0.42	0.03	-	0.100

Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
Spoolarc 75	As Welded	589 MPa (85 ksi)	669 MPa (97 ksi)	22 %	56 J @ -29 °C (41 ft-lb @ -20.2 °F)

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Typical Mechanical Properties

Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
Spoolarc 81	As Welded	513 MPa (74 ksi)	607 MPa (88 ksi)	26 %	81 J @ -29 °C (60 ft-lb @ -20.2 °F)
Spoolarc 83	As Welded	663 MPa (96 ksi)	761 MPa (110 ksi)	24 %	43 J @ -29 °C (32 ft-lb @ -20.2 °F)