

OK Flux 281

OK Flux 281 is an active flux intended for welding gauge thickness and thin steel plate (up to 3/8 in. thick) for butt, lap and fillet welds. Due to the excellent operating characteristics, quality welds with self-peeling slag and free from undercut may be achieved with welding speeds ranging from 50 to 100 inches per minute. *Single pass application only. Any mechanical property and undiluted weld chemistry listed are for information only.

Specifications

Classifications	ASME SFA 5.17 AWS A5.17 : F7AO-EM12K AWS A5.17 : F7AO-EM13K
Industry	Metal Beam Fabrication Pipe Construction Tank and Vessel Fabrication Railcars

Classifications

Wire	AWS/EN	AWS - As Welded
Spoolarc 29S	AWS A5.17: EM13K	F7A0-EM13K
Spoolarc 29S	A5.17:EM13K	-
Spoolarc 81	AWS A5.17: EM12K	F7A0-EM12K

Approvals

Combined with Wire

*Selected production units only. Please contact ESAB for more information. Visit esab.com to download specific flux/wire combination fact sheets for more details.

Typical Wire Composition %

C	Mn	Si	S	P	Cu
Spoolarc 29S					
0.08	1.15	0.5	0.006	0.013	0.06
Spoolarc 81					
0.09	0.95	0.26	0.01	0.01	-

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
Spoolarc 29S As Welded									
0.08	2.15	1.24	0.015	0.027	0.053	0.064	0.025	0.015	0.027
Spoolarc 29S									
0.07	1.80	1.00	0.01	0.02	-	-	-	-	-
Spoolarc 81 As Welded									
0.09	2.02	1.00	0.010	0.030	0.06	0.07	0.03	-	-
Spoolarc 81									
0.07	1.80	0.90	0.01	0.03	-	-	-	-	-

Typical Weld Metal Analysis %

Cu	Nb	Ti	Co
Spoolarc 29S As Welded			
0.127	0.009	0.029	0.010
Spoolarc 81 As Welded			
0.120	-	-	-

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Typical Mechanical Properties					
Combined with Wire	Condition	Yield Strength	Tensile Strength	Elongation	Charpy V-Notch
Spoolarc 29S	As Welded	615 MPa (89 ksi)	680 MPa (99 ksi)	22 %	31 J (23 ft-lb)
Spoolarc 81	As Welded	540 MPa (78 ksi)	635 MPa (92 ksi)	25 %	20 J (28 ft-lb)
Spoolarc 81	As Welded	683 MPa (99 ksi)	774 MPa (112 ksi)	20 %	29 J @ -18 °C (21 ft-lb @ -0.4 °F)