SPOOLARC 86 AWS A5.18: ER70S-6 H4

Elite Series

FEATURES

Spoolarc 86 is a copper-coated solid wire containing high levels of manganese and silicon. Spoolarc 86 is suitable for many carbon steel welding applications using the MIG/Gas Metal Arc Welding (GMAW) process. The high levels of deoxidizers in Spoolarc 86 provide excellent tolerance of rust and mill scale. The high levels of manganese and silicon also provide excellent wetting action and a highly fluid weld puddle. Shielding gas choices for Spoolarc 86 in the GMAW mode are 100% carbon dioxide, argon/carbon dioxide mixtures, argon/oxygen mixtures, and other argon based mixed gas blends. Spoolarc 86 excels in HVAC duct work, heavy equipment fabrication, structural, and other general steel fabrication.

CLASSIFICATIONS AND APPROVALS

- LR: 3S, 3YS (H15)
- ABS/AWS A5.18: ER70S-6 H4
- CAN/CSA-ISO14341,B-G 49A 3C G6 (ER49S-6)
- AWS/ASME SFA5.18: ER70S-6
- AWS/ASME SFA5.17: EH11K
- Certified by CWB to CSA W48
- MIL-E-23765/1: MIL-70S-6

WELDING PROCESS

- GMAW (MIG)
- SAW (Sub Arc)
- GTAW (TIG)

INDUSTRIES

- Automotive
- Mobile Machinery
- General Fabrication
- Shipbuilding

TYPICAL MECHANICAL PROPERTIES

As Welded 75% Ar / 25% CO_2	
Yield Strength	72 ksi, 497 MPa
Tensile Strength	86 ksi, 593 MPa
Elongation in 2”	27%
As Welded 100% CO_2	
Yield Strength	68 ksi, 469 MPa
Tensile Strength	82 ksi, 563 MPa
Elongation in 2”	30%

CHARPY V-NOTCH PROPERTIES

Testing Temperature -20°F (-29°C)	
As Welded 75% Ar / 25% CO_2	
	67 ft-lb, 91 J
As Welded 100% CO_2	45 ft-lb, 61 J

WELD METAL ANALYSIS

75% Ar / 25% CO_2	
C	0.070%
Mn	1.19%
Si	0.62%
P	0.012%
S	0.011%
100% CO_2	
C	0.090%
Mn	1.08%
Si	0.51%
P	0.014%
S	0.010%

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DEPOSITION TABLE				
Electrode Diameter in (mm)	Amps	Deposition Rate lb/hr (kg/hr)		
		98% Ar / 2% CO_2 *98% Eff.	75% Ar / 25% CO_2 *96% Eff.	Straight CO_2 *93% Eff.
.030 (0.8)	75	2.0 (0.91)	1.9 (0.86)	1.8 (0.82)
	100	2.6 (1.18)	2.6 (1.18)	2.5 (1.13)
	150	4.1 (1.86)	4.0 (1.81)	3.9 (1.77)
	200	6.8 (3.08)	6.7 (3.04)	6.5 (2.95)
.035 (0.9)	80	2.2 (1.00)	2.1 (0.95)	2.0 (0.91)
	100	2.7 (1.22)	2.7 (1.22)	2.6 (1.18)
	150	4.2 (1.90)	4.1 (1.86)	4.0 (1.81)
	200	6.2 (2.81)	6.0 (2.72)	5.9 (2.68)
	250	9.0 (4.08)	8.8 (3.09)	8.6 (3.90)
.045 (1.2)	100	2.1 (0.95)	2.0 (0.91)	1.9 (0.86)
	125	2.8 (1.27)	2.8 (1.27)	2.7 (1.22)
	150	3.6 (1.63)	3.5 (1.59)	3.4 (1.54)
	200	5.6 (2.54)	5.5 (2.49)	5.3 (2.40)
	250	7.8 (3.58)	7.6 (3.45)	7.4 (3.36)
	300	10.2 (4.63)	10.0 (4.53)	9.7 (4.40)
	350	13.2 (5.99)	12.9 (5.85)	12.5 (5.67)
1/16 (1.6)	250	6.5 (2.95)	6.4 (2.90)	6.2 (2.81)
	275	7.7 (3.49)	7.6 (3.45)	7.3 (3.31)
	300	9.0 (4.08)	8.8 (3.99)	8.5 (3.86)
	350	11.3 (5.13)	11.0 (6.21)	10.7 (4.85)
	400	14.0 (6.35)	13.7 (6.21)	13.3 (6.03)
	450	17.4 (7.89)	17.1 (7.76)	16.5 (7.48

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Elite Series

DEPOSITION TABLE - Subarc Deposition Data			
Diameter in (mm)	Amps	Deposition Rate lb/hr (kg/hr)	Efficiency%
1/8 (3.2)	400	11.0 (5)	99
	500	14.5 (6.6)	99
	600	18.0 (8.2)	99
5/32 (4.0)	500	12.5 (5.7)	99
	600	16.0 (7.3)	99
	700	19.5 (8.8)	99
	900	26.0 (11.8)	99

PART NUMBER / PRODUCT INFORMATION		
Part Number	Description	UPC
138TF44	86 030X11#SPX44#CT	662303520915
1388F04	86 030X33#SP	662303512859
1382F04	86 030X44#SP	662303507930
138TF45	86 035X11#SPX44#CT	662303520700
1388F05	86 035X33#SP	662303508241
1382F05	86 035X44#SP	662303507947
1388F45	86 035X60#SP	662303508319
1384F25	86 035X65#CL	662303508029
1389F05	86 035X500#MP	662303508425
138UF65	86 035X550#OMP 20 2/PLT	662303521349
138UF85	86 035X550#OMP 20 4/PLT	662303668440
138UF45	86 035X900#OMP 2/PLT	662303521523
138XF45	86 035X900#OMP PBPLT	662303522148
1382F06	86 040X44#SP	662303515973
138UF86	86 040X550#OMP 20 4/PLT	662303668389
138UF46	86 040X900#OMP 2/PLT	662303522490
1388F07	86 045X33#SP	662303508258
1382F07	86 045X44#SP	662303507954

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PART NUMBER / PRODUCT INFORMATION		
Part Number	Description	UPC
1388F47	86 045X60#SP	662303508326
1384F27	86 045X65#CL	662303508036
138LF47	86 045X400#SOMP 8/PLT	662303667658
12Y9F07	86 045X500#MP 4/PLT	662303523084
138UF67	86 045X550#OMP 20 2/PLT	662303668082
138UF87	86 045X550#OMP 20 4/PLT	662303668457
138XF67	86 045X550#OMP 20 PBPLT	662303668792
1389F07	86 045X600#MP	662303508449
138UF47	86 045X900#OMP 2/PLT	662303521493
138XF47	86 045X900#OMP PBPLT	662303521578
138UF27	86 045X1050#OMP 2/PLT	662303522513
138TF41	86 052X11#SP/44#CT	662303669409
1382F01	86 052X44#SP	662303513986
1388F41	86 052X60#SP	662303508302
138UF81	86 052X550#OMP 20 4/PLT	662303668846
138UF41	86 052X900#OMP 2/PLT	662303521394
138XF41	86 052X900#OMP PBPLT	662303668365
138YF28	86 1/16X36X10#T/60#CT F2 AWS	662303087913
1387F28	86 1/16X36X15#CT F2	662303084721
1382F08	86 1/16X44#SP	662303507961
1384F28	86 1/16X65#CL	662303508043
1388F68	86 1/16X700#RL 80-100	662303508371
138UF48	86 1/16X900#OMP 2/PLT	662303521745
138YF30	86 3/32X36X10#T/60#CT F2 AWS	662303671099
1387F30	86 3/32X36X20#CT F2	662303508227
138YF32	86 1/8X36X10#T/60#CT F2 AWS	662303671082
1387F32	86 1/8X36X30#CT F2	662303508234
1387F12	86 1/8X36X40#CT F1	662303515485
1385F53	86 7/32XROD COIL	662303081478