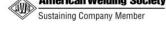


Cert # 05-R0925

70S-6 Carbon Steel Premium Copper Coating







ALLOY DESCRIPTION AND APPLICATION:

70S-6 Premium Copper Coating carbon steel that contains high levels of manganese and silicon for stronger deoxidizing power and has excellent welding results on mild steels where poor fit-up, rust and oils may be present. The single sourcing of the green rod with ultra-concise premium copper coating yields unsurpassed arc and feeding with extended wear on tips and liners. Often used on mild/low alloy steels in applications not limited to: sheet metal, bridges/pipes, shipbuilding, auto industry/repair and all industries/fabrications of mild steels. Manual, semi-automatic or automatic welding using pulse, spray transfer, short circuit transfer with many gases such as 100% CO₂, 75-95 Ar/15-25 CO₂ and 95-98 Ar/ 2-5 O₂.

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TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit (1) 98-95Ar/2-5O2									
Wire Diameter	Wire Speed (ipn	n) Amps	Volts	Travel speed (ipm)	CO_2 (cfh)				
0.023	80-350	30-85	14-19	10-15	20-25				
0.030	110-340	40-130	15-20	12-24	20-25				
0.035	100-520	60-235	16-25	11-40	20-30				
0.045	70-270	90-290	18-23	12-22	25-35				
Spray 0.035	320-600	160-300	23-26	11-22	⁽¹⁾ 25-35				
$0.035^{(2)}$	360-600	180-280	23-30	11-22	⁽² 25-35				
0.045	170-550	170-375	23-29	12-21	$^{(1)}25$ -35				
$0.045^{(2)}$	330-510	280-350	26-30	11-22	⁽² 25-35				
0.052	170-480	220-425	24-30	10-20	$^{(1)}25$ -35				
1/16"	175-350	275-475	25-31	9-19	$^{(1)}25$ -35				

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

TYPICAL WIRE CHEMISTRY (%) AND WELD METAL PROPERTIES; 100%CO₂

	AWS Spec.	70S-6		AWS Spec	Typical
Carbon	0.06-0.15	0.074	Tensile Strength (psi)	70,000 min.	80,380
Manganese	1.40-1.85	1.522	Yield Strength (psi)	58,000 min.	66,587
Silicon	0.80-1.15	0.953	Elongation in 2"	22% min.	24.2%
Phosphorus	0.025 max.	0.018	Charpy V-notch at -20°F	20 ft·lbs min.	28 ft·lbs
Sulfur	0.035 max.	0.019	Reduction of area	n/a	58%
Copper contents and coating 0.5 max.			Average Brinell Hardness	n/a	171

AVAILABLE SIZES: TC 70S-6 = Spools of .030, .035, .045, .052, 1/16

Drums and Other sizes available - please inquire

SPECIFICATIONS; AWS A5.18 ER 70S-6

ASME SFA 5.18 ER 70S-6



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