

Crown ER 70S-6

Gas Metal Arc Welding
(GMAW) MIG Wire

Carbon Steel

DCEP
All Position



"The Royal Line"

CROWN ALLOYS COMPANY

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Superior Carbon Steel MIG Welding Wire

Typical Applications

Crown ER70S-6 is a premium mild steel solid wire formulated to provide high quality welds on heavy duty, high speed, spray transfer applications as well as light duty, low speed, short-arc applications. Because of the higher levels of silicon and manganese **Crown ER70S-6** is designed to tolerate light to medium levels of surface contamination. Therefore, **Crown ER70S-6** will produce a smooth stable arc with low spatter, resulting in a weld bead that ties in evenly with the sides and has a beautiful finished appearance. **Crown ER70S-6** is widely used in frame fabrication, automotive structures, farm implements, construction equipment, pipe fabrication, railcar construction and repair, sheet metal work and general fabrication.

Specifications

AWS A5.18/A5.18M

Crown ER 70S-6	AWS Specification (minimum)	Mechanical Properties using 100% CO ₂	Mechanical Properties using 75%Ar / 25%CO ₂
Tensile Strength	70,000 psi (min)	85,000 psi (typical)	87,500 psi (typical)
Yield Strength	58,000 psi (min)	70,000 psi (typical)	72,500 psi (typical)
Elongation % in 2"	22.0% (min)	29.0% (typical)	29.5% (typical)
Charpy V-Notch @ -20°F	20 ft.lbs. (min)	52 ft.lbs. (typical)	82 ft.lbs. (typical)

Procedure

Use DC reverse polarity (DCEP) electrode positive. This setting will facilitate the welding of sections as thin as 24 gauge (approximately 0.025 inches) with no burn-through. Suggested welding parameters are as follows:

Short Circuit Transfer Welding Parameters

Diameter	Shielding Gas	Welding Current (amps)	Arc Voltage (volts)	Travel Speed (ipm)	Wire Feed Speed (ipm)	Gas Flow (cfh)
.023	100%CO ₂ or 75%Ar / 25%CO ₂	30 - 55	13 - 15	10 - 20	30 - 200	20 - 35
.030	100%CO ₂ or 75%Ar / 25%CO ₂	30 - 75	15 - 19	10 - 22	75 - 225	20 - 35
.035	100%CO ₂	55 - 175	22 - 26	15 - 35	95 - 290	20 - 35
	75%Ar / 25%CO ₂	70 - 235	17 - 29	15 - 35	120 - 675	20 - 35
.045	100%CO ₂	140 - 225	18 - 31	14 - 25	130 - 400	20 - 35
	75%Ar / 25%CO ₂	160 - 310	18 - 31	14 - 25	160 - 430	20 - 35

Above parameters are for flat and horizontal fillet positions. Reduce current 10% to 15% for vertical and overhead welding.

Spray Transfer Welding Parameters

Diameter	Shielding Gas	Welding Current (amps)	Arc Voltage (volts)	Travel Speed (ipm)	Wire Feed Speed (ipm)	Gas Flow (cfh)
.030	95%Ar / 5%CO ₂	75 - 225	19 - 26	10 - 22	150 - 500	35 - 50
.035	95%Ar / 5%CO ₂	160 - 275	24 - 30	10 - 22	320 - 510	35 - 50
.045	95%Ar / 5%CO ₂	170 - 375	23 - 32	11 - 21	170 - 550	35 - 50

Sizes and Part Numbers

MIG Diameter	Part Numbers		
	2 lb (4") Spools	8" Spools	33 lb Spools
.023	MS70S6/1D	MS70S6/2D	MS70S6/3D
.030	MS70S6/1E	MS70S6/2E	MS70S6/3E
.035	MS70S6/1F	MS70S6/2F	MS70S6/3F
.045	MS70S6/1G	MS70S6/2G	MS70S6/3G



!!!! WARNING !!!!



WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.

BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND THE NEW 16 SECTION SAFETY DATA SHEET (SDS).

THE SAFETY DATA SHEET (SDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE SDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.

DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE SDS.

SEE THE PRODUCT WARNING LABEL AND SDS FOR COMPLETE WARNING INFORMATION.

