

ER70S-6 (GMAW) (MIG)

Description:

A general purpose welding wire for fabrication of mild steel. Contains deoxidizers that provide better wetting, yielding a flatter bead shape and the capability of faster travel speeds. Usually used with 75/25 (Argon/CO₂) shielding gas or with higher contents of Argon, such as 90/10. Can also be used with 100% CO₂. Conforms to AWS A5.18 ER70S-6.

Typical Application:

Repairs on a variety of mild and low alloy steels, small diameter pipe and tubing and sheet metal applications. Primarily used for single pass on steels where rusty and dirty surfaces are not cleaned before welding.



ER70S-6 (GMAW) (MIG)

Mild Steel Alloy • AWS ER70S-6

Wire Composition		Classification	Shielding Gas	Tensile Strength
	AWS Requirements*			
%C	0.06-0.15	AWS A5.18/A5.18M:2005 ASME SFA A5.18	75% Argon / 25% CO ₂ 98% Argon / 2% CO ₂ 100% CO ₂	77,000 psi
%Mn	1.40-1.85			
%Si	0.80-1.15			
%Pb	0.025			
%S	0.035			
%Ni	0.15			
%Cr	0.15			
%Mo	0.15			
%V	0.03			
%Cu	0.5			

*Single values are maximum

Polarity	Wire Diameter	Welding Current (AMPS)	Welding Position	Volts	Argon/CO ₂	Wire Feed lpm
DC Reverse Positive Spray Transfer	0.023	85 - 170	All	23 - 27	25	360 - 620
	0.03	135 - 230	All	24 - 28	25	390 - 670
	0.035	165 - 300	All	24 - 28	30	360 - 520
	0.045	200 - 375	All	24 - 30	30 - 35	210 - 360
	1/16"	275 - 500	All	24 - 32	40	150 - 360
	3/32"	300 - 600	All	24 - 33	50	75 - 125

Ordering Information

Part Number	Description	Wire Diameter	Weight
MSS E70S612MS	ER70S-6 .023 - 2 lb. Spool	.023"	2 lb.
MSS E70S615MS	ER70S-6 .023 - 11 lb. Spool	.023"	11 lb.
MSS E70S6E2MS	ER70S-6 .030 - 2 lb. Spool	.030"	2 lb.
MSS E70S6E5MS	ER70S-6 .030 - 11 lb. Spool	.030"	11 lb.
MSS E70S6F2MS	ER70S-6 .035 - 2 lb. Spool	.035"	2 lb.
MSS E70S6F5MS	ER70S-6 .035 - 11 lb. Spool	.035"	11 lb.
MSS E70S6H5MS	ER70S-6 .045 - 11 lb. Spool	.045"	11 lb.



Self-Shielding Steel Alloy

Description:

Self-shielding (no shielding gas needed) carbon steel welding wire for single pass fillet and lap welds on mild and low carbon steel. It has exceptional arc stability, low spatter and excellent operator appeal. Conforms to AWS A5.20 E71T-GS.

Typical Application:

Ideal for home, workshop and auto body repair. It especially works well on galvanized sheet. Can be used in all positions. It is popular for home workshops.

Features:

- DC straight polarity is recommended
- Minimizes burn-through on thin sheet metal
- Excellent for plain and galvanized steels
- A good choice for 110 volt welding machines – no shielding gas required
- Wide weld range of steel thickness, 18 gauge (0.048") to 1/4" (0.125")
- All position capability – excellent on vertical down welding
- No shielding gas means reduced welding costs and the ability to weld in windy conditions
- Easily removed slag



Self-Shielding Steel Alloy

Self-Shielding Welding Wire • AWS E71T-GS

Wire Composition		Classification	Shielding Gas	Tensile Strength
	AWS Requirements*			
%C	0.18	AWS A5.20 E71T-GS	None Required	70,000 psi min
%Mn	0.65			
%Si	0.40			
%P	0.01			
%S	0.01			
%Al	1.30			
%Fe	Remainder			

*Single values are maximum

Polarity	Wire Size	Welding Position	Welding Current (AMPS)	Welding Position	Arc Voltage
DC Straight (DC-)	.030"	All	40 - 100	All	14 - 16
	.035"	All	100 - 130	All	16 - 18
	.045"	All	140 - 160	All	18 - 20

Ordering Information

Part Number	Description	Wire Diameter	Weight
MSS E71TGSE2MS	Self Shielding E71T-GS .030 - 2 lb. Spool	.030"	2 lb.
MSS E71TGSE5MS	Self Shielding E71T-GS .030 - 10 lb. Spool	.030"	10 lb.
MSS E71TGSF2MS	Self Shielding E71T-GS .035 - 2 lb. Spool	.035"	2 lb.
MSS E71TGSF5MS	Self Shielding E71T-GS .035 - 10 lb. Spool	.035"	10 lb.



ER70S-2 (GTAW) (TIG)

Description:

ER70S-2 is a premium, triple-deoxidized wire that provides high quality, defect-free, weld deposits when properly used on most carbon steels. Conforms to AWS A5.18 ER70S-2.

Typical Application:

Repairs on a variety of mild and low alloy steels, small diameter pipe and tubing, sheet metal applications, and root pass pipe welding.



ER70S-2 (GTAW) (TIG)

Mild Steel Alloy • AWS ER70S-2

Wire Composition		Classification	Shielding Gas	Tensile Strength
	AWS Requirements*			
%C	0.07	AWS A5.18/A5.18M:2005 ASME SFA A5.18:ER70S-2	75% Argon / 25% CO ₂ 98% Argon / 2% O ₂	79,000 psi
%Mn	0.90-1.40			
%S	0.40-0.70			
%P	0.025			
%Si	0.035			
%Ni	0.15			
%Cr	0.15			
%Mo	0.15			
%V	0.03			
%Cu	0.50			
%Ti	0.05-0.15			
%Zr	0.02-0.12			
%Al	0.05-0.15			
%Fe	Remainder			

*Single values are maximum

Polarity	Material Thickness	Tungsten Diameter	Filler Wire Diameter	Welding Current (AMPS)	Welding Position	Gas Cup	Argon (CFH)
Direct Current Electrode Negative	1/16"	1/16"	1/16"	100 - 140	All	3/8"	20
	3/32"	1/16"	1/16"	100 - 160	All	3/8"	20
	1/8"	3/32"	1/16"	125 - 200	All	7/16"	20
	3/16"	3/32"	3/32"	150 - 250	All	7/16"	25
	1/4"	1/8"	1/8"	150 - 250	All	1/2"	25
	3/8"	1/8"	1/8"	150 - 275	All	1/2"	25
	1/2"	1/8"	1/8"	150 - 300	All	1/2"	25

Ordering Information

Part Number	Description	Wire Diameter	Weight
MSS E70S2300MS	ER70S-2 1/16 x 36 - 1 lb. Package	1/16" x 36"	1 lb.
MSS E70S230MS	ER70S-2 1/16 x 36 - 10 lb. Package	1/16" x 36"	10 lb.
MSS E70S2500MS	ER70S-2 3/32 x 36 - 1 lb. Package	3/32" x 36"	1 lb.
MSS E70S250MS	ER70S-2 3/32 x 36 - 10 lb. Package	3/32" x 36"	10 lb.
MSS E70S2600MS	ER70S-2 1/8 x 36 - 1 lb. Package	1/8" x 36"	1 lb.
MSS E70S260MS	ER70S-2 1/8 x 36 - 10 lb. Package	1/8" x 36"	10 lb.
MSS E70S270MS	ER70S-2 5/32 x 36 - 10 lb. Package	5/32" x 36"	10 lb.



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ER70S-6 (GTAW) (TIG)

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Typical Application:

Repairs on a variety of mild and low alloy steels, small diameter pipe and tubing and sheet metal applications. Primarily used for single pass on steels where rusty and dirty surfaces are not cleaned before welding.



ER70S-6 (GTAW) (TIG)

Mild Steel Alloy • AWS ER70S-6

Wire Composition		Classification	Shielding Gas	Tensile Strength
	AWS Requirements*			
%C	0.06-0.15	AWS A5.18/A5.18M:2005 ASME SFA 5.18	75% Argon / 25% CO ₂ 98% Argon / 2% CO ₂ 100% CO ₂	77,000 psi
%Mn	1.40-1.85			
%Si	0.80-1.15			
%Pb	0.025			
%S	0.035			
%Ni	0.15			
%Cr	0.15			
%Mo	0.15			
%V	0.03			
%Cu	0.5			

*Single values are maximum

Polarity	Material Thickness	Tungsten Diameter	Filler Wire Diameter	Welding Current (AMPS)	Welding Position	Gas Cup	Argon (CFH)
DCSP 2% Ceriated Tungsten Electrode Negative	1/16"	1/16"	1/16"	80 - 120	All	3/8"	20
	3/32"	1/16"	1/16"	145 - 205	All	3/8"	20
	1/8"	3/32"	1/16"	300 - 350	All	7/16"	20
	3/16"	3/32"	3/32"	515 - 640	All	7/16"	25
	1/4"	1/8"	1/8"	70 - 150	All	1/2"	25
	3/8"	1/8"	1/8"	150 - 200	All	1/2"	25
	1/2"	1/8"	1/8"	230 - 400	All	1/2"	25

Ordering Information

Part Number	Description	Wire Diameter	Weight
MSS E70S6300MS	ER70S-6 1/16 x 36 - 1 lb. Package	1/16" x 36"	1 lb.
MSS E70S630MS	ER70S-6 1/16 x 36 - 10 lb. Package	1/16" x 36"	10 lb.
MSS E70S6500MS	ER70S-6 3/32 x 36 - 1 lb. Package	3/32" x 36"	1 lb.
MSS E70S650MS	ER70S-6 3/32 x 36 - 10 lb. Package	3/32" x 36"	10 lb.
MSS E70S6600MS	ER70S-6 1/8 x 36 - 1 lb. Package	1/8" x 36"	1 lb.
MSS E70S660MS	ER70S-6 1/8 x 36 - 10 lb. Package	1/8" x 36"	10 lb.
MSS E70S670MS	ER70S-6 5/32 x 36 - 10 lb. Package	5/32" x 36"	10 lb.

